THE AUK:

A QUARTERLY JOURNAL OF

ORNITHOLOGY.

VOL. XX. JULY, 1903. NO. 3

NOTES ON THE ORNITHOLOGICAL OBSERVATIONS OF PETER KALM.

BY SPENCER TROTTER.

A PECULIAR interest lends itself to pioneer work in any branch of knowledge, and the early history of things holds a charm that is hard to explain on purely logical grounds. Such an interest gathers about the work of Peter Kalm, the Swede, who travelled in North America during the years 1748–1751. Kalm was primarily a botanist and was sent out to America to gather specimens of plants and seeds with a view to the acclimatization of different species in Sweden. On his return to Sweden he published an account of his observations and travels in a work of three volumes entitled 'En Resa Til Norra America,' which appeared at Stockholm between the years 1753–1761. The original was later translated into English, German, and Dutch, the English translation by John Reinhold Forster appearing in three volumes under the title of 'Travels into North America,' published at London in 1770–1771. Forster was an English naturalist of some note and his name is commemorated in one of the beautiful species of North American terns.

Accustomed as we are to look upon Wilson and Audubon as the pioneers in American Ornithology we are apt to lose sight of earlier workers in the field who left behind no great monuments. To be sure, Mark Catesby's work (1730–1748) is a pre-Wilsonian monument of illustrated ornithology, and the works of Edwards,

Pennant, and Latham contain numerous illustrations of North American birds. Peter Kalm's work, on the other hand, is merely a desultory account of the different birds he observed during his sojourn, principally in the country about Philadelphia, scattered through the text of the volumes, coupled with observations borrowed from the more intelligent Swedish and English residents. The greater number of species seems altogether to have escaped his notice, probably because the plant rather than the bird was in his mind's eye. Kalm's observations have little scientific value, but they possess a certain freshness that commends them to every lover of the wayside. It is restful in these days of accurately annotated lists of many geographical forms to turn to the simple statements of what this man saw and heard and thought. The birds he tells us about are only the common birds known to the country folk. His observations give us a glimpse of historical background — a bit of real bird life in America more than half a century before the father of American Ornithology began his work.

Kalm mentions a number of birds observed during the voyage, including the Petrel, Shearwater, Tropic Bird, Gull, and Tern. "The Petrel (*Procellaria Pelagica*, Linn.)," says Kalm, "was our companion from the channel to the shores of America."

It is probable that he had under observation not only the Stormy Petrels (*P. pelagica*) but the other two species of "little black white-rumped 'Mother Carey's Chickens'" — Leach's Petrel (*Oceanodroma leucorhoa*), and Wilson's Petrel (*Oceanites oceanicus*) as well.

The shearwater described under the name of "*Procellaria Puffinus*, Linn." is probably referable to three species — the Manx Shearwater (*Puffinus puffinus*), the Greater Shearwater (*P. major*), and the Sooty Shearwater (*P. fuliginosus*) — for Kalm speaks of having seen the bird from "the channel to the American coasts"; also that "it has a brown back, and commonly a white ring round its neck." The first species is abundant on the eastern side, but rare on the western side of the Atlantic, while the word "commonly" would seem to indicate that some individuals of the Sooty Shearwater — a solid colored species — were also seen. A number of land birds took refuge on the ship from time to time, and were noted by Kalm.

The following observations pertain to the several species of American birds noted by Kalm. These ornithological observations are scattered through the book, sandwiched in among the mass of heterogeneous matter gathered by this untiring recorder. "No circumstance interesting to natural history or to any other part of literature has been omitted." The first English edition of 3 vols. (from which these notes have been drawn) and the second edition of 2 vols. (1772) contain numerous notes by the translator. The binomial nomenclature, affixed to the species, is evidently the work of Kalm after his return to Sweden, for, as Dr. Coues observes, "these accounts are among the bases of several Linnæan species, though largely anticipated by Catesby and Edwards" (Birds of the Colorado Valley, Bibliographical Appendix, p. 585).

DUCKS — *Sp. ?* — Under date of October 30, 1748, Kalm mentions seeing large numbers of ducks between Staten Island and "the town of New York." "We saw a number of wild ducks in immense quantities upon the water: the people called them Blue bills, and they seemed to be the same with our *Pintail ducks*, or *Linnæus's Anas acuta*; but they were very shy." (Eng. Trans., Vol. I, p. 237.)

Wild fowl had evidently greatly decreased in numbers even at the time Kalm wrote, as appears in a note written at Philadelphia under date of November 9, 1748. The note is concluded with the following observation: "But since the arrival of great crowds of *Europeans*, things are greatly changed: the country is well peopled, and the woods are cut down: the people increasing in this country, they have by hunting and shooting in part extirpated the birds, in part scared them away: in spring the people still take both eggs, mothers and young indifferently, because no regulations are made to the contrary. And if any had been made, the spirit of freedom which prevails in the country would not suffer them to be obeyed."

CRANES.— Under date of February 17, 1749, at the village of Raccoon, New Jersey, a few miles below Philadelphia and almost opposite the site of Chester, Pa., Kalm makes the following observation:

"Cranes (*Ardea Canadensis*) were sometimes seen flying in the day-time, to the northward. They commonly stop here early in

spring, for a short time, but they do not make their nests here, for they proceed on more to the north. Certain old *Swedes* told me, that in their younger years, as the country was not yet much cultivated, an incredible number of cranes were here every spring; but at present they are not so numerous. Several people who have settled here, eat their flesh, when they can shoot them. They are said to do no harm to corn, or the like." (Eng. Trans., II, p. 72.)

The Whooping Crane (*Grus americana*) was at one time abundant on our Atlantic seaboard, and this is the species probably referred to by Kalm. Dr. Coues says of *G. americana*: "So wild and wary a bird must be much influenced by the settlement of the country."

PARTRIDGES. — At Raccoon, New Jersey, where Kalm spent much of his time among the Swedes, is a note under date of January 22, 1749, in which we can hardly fail to recognize our Virginia Partridge or "Bob White." The "hazel-hen" referred to in the following note is undoubtedly the Ruffed Grouse — "the birds which the *Swedes* in this country call *Partridges* and *Hazel-hens* were in whole flocks in the woods" (Eng. Trans., Vol. I, p. 290). While at Montreal Kalm heard of a bird which he judged to be the "*Ptarmigans*, or *Snow-hens* (*Tetrao Lagopus*)." (Eng. Trans., III, p. 58.)

WILD TURKEY. — "*Turkey Cocks* and *Hens* run about in the woods of this country, and differ in nothing from our tamer ones, except in their superior size, and redder, though more palatable flesh. When their eggs are found in the wood, and put under *Turkey* hens, the young ones become tame; however when they grow up, it sometimes happens that they fly away; their wings are therefore commonly clipped, especially when young. But the tamed turkeys are commonly much more irascible, than those which are naturally tame. The Indians likewise employ themselves in taming them and keeping them near their huts." (Eng. Trans., I, p. 209.)

WILD PIGEON. — At Raccoon, New Jersey, under date of March 3, 1749, occurs the following note: — "*Wild Pigeons* (*Columba Migratoria*), flew in the woods, in number beyond conception, and I was assured that they were more plentiful than they had been

for several years past. They came this week, and continued here for about a fortnight, after which they all disappeared, or advanced further into the country, from whence they came." (Eng. Trans., II, p. 82.)

HUMMINGBIRD.— "Of all the rare birds of *North America*, the *Humming Bird* is the most admirable, or at least most worthy of peculiar attention. Several reasons induce me to believe that few parts of the world can produce its equal. Dr. *Linnæus* calls it *Trochilus Colubris*. The *Swedes* and some *Englishmen* call it the *King's* bird, but the name of *Humming bird* is more common." (Eng. Trans., I, p. 210.)

Following this statement are five pages devoted to the description and habits of this interesting little bird, which seems to have excited the wonder and admiration of so many of the early travellers in America.

WHIP-POOR-WILL.— At Raccoon, New Jersey, under date of April 22, 1749, Kalm gives a somewhat lengthy account of this species, calling attention to the peculiarity of its notes as follows:— "I heard it to-day, for the first time, and many other people said, that they had not heard it before this summer; its *English* and *Swedish* name is taken from its note; but, accurately speaking, it does not call *Whipperiwill*, nor *Whip-poor-will*, but rather *Whipperiwhip*, so that the first and last syllables are accented, and the intermediate ones but slightly pronounced. The *English* change the call of this bird into *Whip-poor-will*, that it may have some kind of signification: it is neither heard nor seen in day-time; but soon after sunset it begins to call, and continues for a good while, as the cuckow does in Europe." Observations on the habits of the bird follow. (Eng. Trans., II, p. 151.)

WOODPECKERS.— At Philadelphia, under date of October 1, 1748, Kalm writes: "*A Black Woodpecker* with a red head, or the *Picus pileatus, Linn.* is frequent in the *Pennsylvanian* forests, and stays the winter, as I know from my own experience. It is reckoned among those birds which destroy the maize; because it settles on the ripe ears, and destroys them with its bill. The *Swedes* call it *Tillkroka*, but all other woodpeckers, those with gold yellow wings excepted, are called *Hackspickar* in the *Swedish* language. I

intend to describe them altogether more exactly in a particular work. I only observe here, that almost all the different species of woodpeckers are very noxious to the maize, when it begins to ripen: for by picking holes in the membrane round the ear, the rain gets into it, and causes the ear with all the corn it contains to rot." (Eng. Trans., I, p. 148.)

Kalm had not yet spent a winter in America, though he speaks in the above note of knowing this bird to stay through the winter from his own experience. It is evident, therefore, that his original notes were carefully gone over upon his return to Sweden, in view of their publication. Under date of March 11, 1749, at Raccoon, New Jersey, a list of the woodpeckers was drawn up, and later revised. It is interesting as being probably the first annotated list of any group of North American birds. (Eng. Trans., II, pp. 85–88.) In this review of the woodpeckers by Kalm the most notable fact, which must be taken *cum grano salus*, is the occurrence of the Ivory-billed Woodpecker, as far north as the Delaware Valley. Possibly the bird had been observed as a straggler (for Kalm speaks of it as being only an occasional visitor) on the borders of the dense cedar swamps and pine forests of South Jersey, and this region we know is decidedly Carolinian in its faunal and floral features. At that time also a more or less unbroken woodland must have extended far up along the shores of the Delaware, quite to the site of the old Swedish village of Raccoon. But this is idle speculation, for the bird has never been authentically reported from Pennsylvania or New Jersey.

The Pileated Woodpecker is a true forest lover, and even in the time of Alexander Wilson had, like the Indian, retreated into the wilderness beyond the ever widening domain of cleared land.

Kalm seems to have been imbued with the notion that the smaller species of woodpeckers were enemies to agriculture and the orchards. The sins of the real sap-sucker were shared for many long years by his less-offending brethren. The word "flicker" does not appear among the local names of *Colaptes auratus*, the species being referred to as the "gold-winged woodpecker" and also under its Swedish names of "Hittock" and "Piut." The ground-loving habits of this bird, the palatability of its flesh, and its resemblance to the European cuckoo are commented upon.

The remarks of Kalm concerning the abundance of the Red-headed Woodpecker (*Melanerpes erythrocephalus*) in early winter as predicting a mild season brings to mind an observation made some years ago by Chris Wood, the collector. He predicted a winter of great sickness from the fact that Red-headed Woodpeckers were unusually numerous, and added that he had never known this prognostic to fail. This is an interesting piece of folklore and is probably akin to the old saying that "a green Christmas makes a fat churchyard."

The species enumerated, other than those above mentioned, are *Sphyrapicus varius*, *Dryobates villosus*, *D. pubescens*, and *Melanerpes carolinus*.

CROW. — At Philadelphia, under date of September 26, 1748, is the following observation concerning crows. "The *Crows* in this country are little different from our common crows in *Sweden*. Their size is the same with that of our crows, and they are as black as jet in every part of their body. I saw them flying to-day in great numbers together. Their voice is not quite like that of our crows, but has more of the cry of the rook, or *Linnæus's Corvus frugilegus*." (Eng. Trans., I, p. 121.)

Under date of February 10, 1749, Kalm alludes to the premiums set upon crows' heads in the following passage. "They belong to the noxious birds in this part of the world, for they chiefly live upon corn. After the maize is planted or sown, they scratch the grains out of the ground and eat them. When the maize begins to ripen, they peck a hole into the involucrum which surrounds the ear, by which means the maize is spoiled, as the rain passes through the hole which they have made, and occasions the putrifaction of the corn. Besides eating corn, they likewise steal chickens. They are very fond of dead carcasses. Some years ago the government of *Pennsylvania* had given three-pence, and that of *New Jersey* four-pence premium for every head of a *crow*, but this law has now been repealed, as the expenses are too great."

BLACKBIRDS. — In remarking upon the decrease of wild fowl (already cited) Kalm goes on to say: "But though the eatable birds have been diminished greatly, yet there are others, which have rather increased than decreased in number, since the arrival of the *Europeans:* this can most properly be said of a species of

daws which the *English* call *Blackbirds* [a foot-note speaks of them as "*Properly shining blackbirds*"] and the *Swedes Maize thieves. Dr. Linnæus* calls them *Gracula Quiscula.*" (Eng. Trans., I, p. 291.)

Under date of February 23, 1749, at Raccoon, New Jersey, is a lengthy account of blackbirds, in which the author, among other observations, calls attention to the following:

"A species of birds, called by the *Swedes*, *maize-thieves*, do the greatest mischief in this country. They have given them that name, because they eat maize, both publicly and secretly, just after it is sown and covered with the ground, and when it is ripe. The *English* call them *blackbirds*. There are two species of them, both described and drawn by *Catesby*. Though they are very different in species, yet there is so great a friendship between them, that they frequently accompany each other in mixed flocks. However, in *Pennsylvania*, the first sort are more obvious, and often fly together, without any of the red-winged *stares*.... As they are so destructive to maize, the odium of the inhabitants against them is carried so far, that the laws of *Pennslyvania* and *New Jersey* have settled a premium of three-pence a dozen for dead maize thieves. In *New England*, the people are still greater enemies to them; for Dr. *Franklin* [Benjamin Franklin] told me, in the spring of the year 1750, that, by means of the premiums which have been settled for killing them in *New England*, they have been so extirpated, that they are very rarely seen, and in a few places only. But as, in the summer of the year 1749, an immense quantity of worms appeared in the meadows, which devoured the grass, and did great damage, the people have abated their enmity against the maize-thieves; for they thought they had observed, that those birds lived chiefly on these worms before the maize is ripe, and consequently extirpated them, or at least prevented their spreading too much. They seem therefore to be entitled, as it were, to a reward for their trouble. But after these enemies and destroyers of the worms (the maize-thieves) were extirpated, the worms were more at liberty to multiply; and therefore they grew so numerous, that they did more mischief now than the birds did before. In the summer, 1749, the worms left so little hay in *New England*, that the inhabitants were forced to

get hay from *Pennsylvania*, and even from *Old England.* The maize-thieves have enemies besides the human species. A species of little hawks live upon them, and upon other little birds. I saw some of these hawks driving up the maize-thieves, which were in the greatest security, and catching them in the air. Nobody eats the flesh of the purple maize-thieves or daws (*Gracula quiscula*); but that of the red-winged maize-thieves, or stares (*Oriolus Phœniceus*) is sometimes eaten. Some old people have told me, that this part of *America*, formerly called *New Sweden*, still contained as many maize-thieves as it did formerly. The cause of this they derive from the maize, which is now sown in much greater quantity than formerly; and they think that the birds can get their food with more ease at present." (Eng. Trans., II, pp. 73–79.)

The purple "maize-thieves" are apparently as abundant now, about Philadelphia, as they were in the time that Kalm wrote of them. They come to us about the last of February, as Kalm noted more than a century and a half ago, and during the early autumn swarm in incredible numbers over the fields of standing corn. One autumn blackbird roost that I have known of for several years past, on the edge of a populous town, must contain thousands of birds. The babel of voices from this roost at sundown is a sound never to be forgotten and falls on the distant ear as a continuous roar.

BOBOLINK.— In a journey up the Hudson during the month of June, 1749, Kalm first saw the bobolink, as is attested by the following note: "*The white-backed Maize-thieves* appeared now and then, flying amongst the bushes: their note is fine, and they are not so large as the black maize-thieves (*Oriolus Phœniceus*). We saw them near *New York*, for the first time." (Eng. Trans., II, p. 274.)

CARDINAL.— At Raccoon, New Jersey, under date of February 14, 1749, Kalm has entered in his journal the following note: "*Red-bird* is another species of small bird. *Catesby* has likewise figured it. Dr. *Linnæus* calls it, *Loxia Cardinalis.* It belongs to that class of birds which are enemies to bees, lying in wait for them and eating them. I fed a cock for five months together in a cage; it eat both maize and buckwheat, for I gave it nothing

else. By its song it attracted others of its species to the court-yard, and after we had put some maize on the ground under the window where I had it, the others came there every day to get their food; it was then easy to catch them by means of traps. Some of them, especially old ones, both cocks and hens, would die of grief on being put into cages. Those on the other hand which were grown tame, began to sing exceedingly sweet. Their note very nearly resembles that of our *European* nightingale, and on account of their agreeable song, they are sent abundantly to *London*, in cages. They have such strength in their bill that when you hold your hand to them they pinch it so hard as to cause the blood to issue forth. In spring they sit warbling on the tops of the highest trees in the woods, in the morning. But in cages they sit quite still for an hour; the next hour they hop up and down, singing; and so they go on alternately all day." (Eng. Trans., II, p. 71.)

SNOWBIRD.— In the journal at Raccoon, New Jersey, dated January 21, 1749, is the following note: "A small kind of birds, which the *Swedes* call *Snow-bird*, and the *English Chuck-bird*, come into the houses about this time. At other times, they sought their food along the roads. They are seldom seen, but when it snows. *Catesby*, in his Natural History of *Carolina*, calls it *Passer Nivalis*; and Dr. *Linnæus*, in his *Systema Naturæ*, calls it *Emberiza hyemalis*." (Eng. Trans., II, p. 51.)

Again, under date of March 3, 1749, at Raccoon, is the following: "The *Swedes* call a species of little birds, *Snofogel*, and the *English* call it *Snow-bird*. This is Dr. *Linnæus's Emberiza hyemalis*. The reason why it is called snow-bird is because it never appears in summer, but only in winter, when the fields are covered with snow. In some winters they come in as great numbers as the maize-thieves, fly about the houses and barns, into the gardens, and eat the corn, and the seeds of grass, which they find scattered on the hills." (Eng. Trans., II, p. 81.)

SWALLOWS.— "April the 16th [1749]. This morning I returned to Raccoon [from Chester, Penna., on the opposite side of the Delaware]. This country has several kinds of swallows, viz. such as live in barns, in chimneys, and under ground; there are likewise martens.

"The *Barn Swallows*, or *House Swallows* are those with a furcated tail. They are Linnæus's *Hirundo rustica.* I found them in all parts of *North America* which I travelled over. [This statement shows that the original entry about swallows in the journal was shaped up after Kalm's return to Sweden, for as yet he had only travelled as far as New York and back]. They correspond very nearly to the *European House Swallow* in regard to their colour, however there seems to be a small difference in the note. I took no notice this year when they arrived: but the following year, 1750, I observed them for the first time on the 10th of *April* (new style); the next day in the morning, I saw great numbers of them sitting on posts and planks, and they were as wet as if they had been just come out of the sea. [At this point is inserted a lengthy editorial *excursus* by Forster on the hibernation of swallows.] They build their nests in houses, and under the roofs on the outside; I likewise found their nests built on mountains and rocks whose top projected beyond the bottom; they build too under the corners of perpendicular rocks; and this shews where the *Swallows* made their nests, before the *Europeans* settled and built houses here; for it is well known that the huts of the *Indians* could not serve the purpose of the *Swallows.*

"The *Chimney Swallows* are the second species, and they derive their name from building their nests in chimneys which are not made use of in summer: sometimes when the fire is not very great, they do not mind the smoke, and remain in the chimney. I did not see them this year till late in *May*, but in the ensuing year, 1750, they arrived on the 3rd of May, for they appear much later than the other *Swallows.* It is remarkable that each feather in their tail ends is a stiff sharp point, like the end of an awl; they apply the tail to the side of the wall of the chimneys, hold themselves with their feet, and the stiff tail serves to keep them up: they make a great thundering noise all the day long, by flying up and down in the chimneys; and as they build their nests in chimneys only, and it is well known that the *Indians* have not so much as a hearth made of masonry, much less a chimney, but make their fires on the ground in their huts, it is an obvious question, where did these *Swallows* build their nests before the *Europeans* came, and made houses with chimneys? It is probable that they form-

erly built them in great hollow trees. This opinion was adopted by Mr. *Bartram* [the elder Bartram — John Bartram, the first American botanist and correspondent of Linnæus], and many others here. *Catesby* has described the *Chimney Swallow* and figured it, and Dr. *Linnæus* calls it *Hirundo Pelasgia.*

"The *Ground Swallows* or *Sand Martins*, (*Linnæus's Hirundo riparia*) are to be met with everywhere in *America*; they make their nests in the ground on the steep shores of rivers and lakes.

"The *Purple Martins* have likewise been described and drawn in their natural colours by *Catesby*. Dr. *Linnæus* likewise calls them *Hirundo purpurea.* They are less common here than the former species; I have seen in several places little houses made of boards, and fixed on the outside of the walls, on purpose that these *Martins* may make their nests in them; for the people are very desirous of having them near their houses, because they both drive away hawks and crows as soon as they see them, and alarm the poultry by their anxious note, of the approach of their enemies. The chickens are likewise used to run under shelter, as soon as they are warned by the *Martins*." (Eng. Trans. II, pp. 140–148.)

Probably half a century before Kalm wrote the Swifts, the Martins, and the Barn Swallows had forsaken the rock ledge and hollow tree to cast in their lot with the settlers, doubtless reminding many a sad heart of —

"The swallow twitt'ring from the straw-built shed,"

in the old homes across the sea.

MOCKINGBIRD.— While journeying to New York, at a point not far from Philadelphia, Kalm entered a note in his journal, under date of October 27, 1748, from which the following passage is taken. "At one of the places where we stopt to have our horses fed, the people had a *Mocking-bird* in a cage; and it is here reckoned the best singing-bird, though its plumage is very simple, and not showy at all. At this time of the year it does not sing. *Linnæus* calls it *Turdus polyglottos*, and *Catesby* in his *Natural History of Carolina*, Vol. I, p. 27, tab. 27, has likewise described and drawn this bird. The people said that it built its nests in the bushes and trees, but is so shy, that if anybody come and look at its eggs, it leaves the nest, never to come to it again." (Eng. Trans., I, pp. 217–219).

This is interesting as an early northern record for the mocking-bird. From Kalm's statements it would appear that the bird was a more or less common summer resident in the region about Philadelphia. The species does occasionally breed in this neighborhood and may have been much more abundant in the earlier days of the settlements.

CATBIRD.— Under date of September 7, 1748, at Philadelphia is the following note: "Mr. *Peter Cock*, a merchant of this town, assured me that he had last week himself been a spectator of a snake's swallowing a little bird. This bird, which from its cry has the name of *Cat bird*, (*Muscicapa Carolinensis, Linn.*) flew from one branch of a tree to another, and was making a doleful tune." (Eng. Trans., I, p. 61.)

The rest of the narrative is a "snake story." Suffice it to say that the snake swallowed the bird, but was ultimately killed by the valiant Cock. Mr. Cock, by the way, was a very reputable citizen.

ROBIN.— In Kalm's journal at Raccoon, under date of March 12, 1749, is the following short note concerning the robin: "The bird which the *English* and *Swedes* in this country call *Robin-red-breast*, is found here all the year round. It is a very different bird from that which in *England* bears the same name. It is *Linnæus's Turdus migratorius*. It sings very melodiously, is not very shy, but hops on the ground quite close to the houses." (Eng. Trans., II, p. 90.)

BLUEBIRD.— A note dated Raccoon, New Jersey, February 14, 1749, says: "The *Swedes* and the *English* gave the name of *blue-bird* to a very pretty little bird, which was of a fine blue colour, Linnæus calls it *Motacilla Sialis*. *Catesby* has drawn it in his *Natural History of Carolina*, Vol. I, pl. 47, and described it by the name of *Rubecula Americana cærulea nitida, pectore rufo, ventre albo*. In Catesby's plate I must observe, that the color of the breast ought to be dirty red or ferruginous; the tibiæ and feet black as jet; the bill too should be quite black; the blue colour in general ought to be much deeper, more lively and shining; no bird in *Sweden* has so shining and deep a blue color as this: The jay has perhaps a plumage like it. The food of the blue bird is not merely insects, he likewise feeds upon plants; therefore in

winter, when no insects are to be met with, they come to the farm-houses in order to subsist on the seeds of hay, and other small grains." (Eng. Trans., II, p. 70.)

There is little of value to the ornithologist in these fragmentary notes, but the quaintness of the statements, and the pictures which they call up of birds against the background of those early times possess a certain charm in themselves. Moreover, as Dr. Coues has remarked, some of these descriptions formed the basis of several Linnæan species. Kalm saw the birds for himself and came directly in contact with their surroundings. Therein lies the charm. He left no great work as a monument, but so long as the beautiful Kalmia grows on our hillsides his name will be remembered as that of the friend of Linnæus.

NOTES ON THE BIRDS OF MADISON COUNTY, NEW YORK, WITH ESPECIAL REFERENCE TO EMBODY'S RECENT LIST.

BY WILLIAM R. MAXON.

THE NOTES here offered are intended to supplement Mr. Embody's 'Birds of Madison County, New York,' which was reviewed briefly in 'The Auk' for January, 1902. Mr. Embody's list, professedly incomplete, embodied mainly the results of investigations in the southeastern portion of the county and properly might have borne a less general title; for, small as Madison County is, it is extremely diverse in its biologic associations and many distinct areas must be studied carefully before anything like a comprehensive understanding, or for that matter more than a tolerably complete list, of the avifauna may be had. The central portion of the county, including several high-lying swamps and adjacent hills near Peterboro, have been worked by Mr. G. S. Miller, Jr., who has kindly furnished me many notes hitherto unpublished. To the southward and westward, however, is a simi-

lar territory of higher elevation, with crests ranging to 2000 feet and more, which so far as I know is quite untouched; and in the northwestern portion a considerable territory, including several low swamps not much above the level of nearby Oneida Lake, likewise awaits investigation. These unexplored areas are bound to yield interesting results. Of this I am convinced by the unexpected returns from several short excursions I have undertaken, in the northeastern portion, over the Stockbridge West Hill which reaches a maximum altitude of 1300 feet. Here, for example, I found a good sized colony of the Cerulean Warbler.

Madison County falls for the most part well within the Transition or Alleghanian zone, but there is an odd intermingling of Canadian and Carolinian forms. The Stockbridge West Hill and its opposite slope at the east form the sides of a broad northerly-trending glacial valley (drained by Oneida Creek), some twelve miles long, which, at a point some seven or eight miles south of the eastern end of Oneida Lake, runs out to the level country marking the bed of the ancient stream, that once swept Central New York from the westward. It is this region with which I am most familiar and to which my own records mainly apply. The following notes are published with especial reference to Mr. Embody's list; and in several instances reference is made to earlier records overlooked in its preparation.

1. **Ardetta exilis.** LEAST BITTERN.— Said to be "rarely seen in Madison County. One male taken May 30, 1897." Several specimens have been taken in the Cowasselon Swamp near Oneida during August.

2. **Nycticorax nycticorax nævius.** BLACK-CROWNED NIGHT HERON. — Not mentioned in the list; may be put down as an occasional transient visitant (See Bagg in Auk, XIV, 227, 1897).

3. **Ægialitis vocifera.** KILLDEER.— Given as a "very common summer resident." In the northeastern parts of the county the bird is rather uncommon, and it seems likely that its distribution is very local throughout.

4. **Colinus virginianus.** BOB-WHITE.— "None recorded since 1893. Formerly a not uncommon summer resident." Still occasional between Oneida and the Lake. A nest was taken at Peterboro in the summer of 1894, the only time the bird has been known to occur in that vicinity. (See also Auk, XIV, 226, 1897, and XVII, 178, 1900.)

5. **Zenaidura macroura.** MOURNING DOVE.— "Rare. One bird seen April 28, 1896." This statement is to be accounted for only upon the

score of oversight. The bird is common all the way from the lowlands of Oneida Lake south along the Stockbridge Valley to Munnsville and to Eaton where I have repeatedly observed small flocks in the buckwheat fields. Out of more than 25 nests found the majority were in apple trees but occasionally in a pine, a white cedar, or upon a fallen log.

6. **Haliæetus leucocephalus.** BALD EAGLE.— Decidedly less common than formerly, but still to be seen on Oneida Lake. Lewis Point, near South Bay, has been a favorite nesting place for many years.

7. **Dryobates villosus.** HAIRY WOODPECKER.— "Very common resident. Breeds." It seems extremely doubtful if this species is "very common" in any part of the county; certainly it is tolerably rare in the northern portion.

8. **Sphyrapicus varius.** YELLOW-BELLIED SAPSUCKER.—Mr. Embody reckons this a "very common transient visitant." It is only tolerably common as a migrant, but a few remain to breed.

9. **Melanerpes carolinus.** RED-BELLIED WOODPECKER.— "Of rare and irregular occurrence. One recorded March 8, 1898." Mr. Miller has recorded also (Auk, IX, 201, 1892) taking a bird at Peterboro, Feb. 16, 1886.

10. **Antrostomus vociferus.** WHIP-POOR-WILL.— Included by Mr. Embody only in his hypothetic list. A common summer resident, however, in the low woods about Oneida Lake, particularly at Lewis Point. Mr. Miller has taken one specimen, a fall migrant, at Peterboro.

11. **Chordeiles virginianus.** NIGHTHAWK.— "Of rare occurrence," and only two records given by Mr. Embody. The bird is a common summer resident in the vicinity of Oneida and by Oneida Lake; it may be heard almost any early evening. Mr. Miller regards it as "not uncommon at Peterboro."

12. **Carpodacus purpureus.** PURPLE FINCH.— Given as "very uncommon during the breeding season," which is far from true for northern Madison County. As a migrant it is tolerably abundant, but only a comparatively small number remain through the summer. I have never discovered a nest.[1]

13. **Loxia curvirostra minor.** AMERICAN CROSSBILL.— Mr. Miller reports this to be found at Peterboro throughout the summer. Mr. Embody's latest record is for May 15, but it is said that the "birds may appear at almost any time during the year."

14. **Ammodramus savannarum passerinus.** GRASSHOPPER SPARROW.— Mr. Embody is quite correct in regarding this as "not an uncommon summer resident." In fact where it does occur it is tolerably common; but it was unknown from this district up to July 5, 1895. (See Auk, XIV, 227, 1897, and XVII, 178, 1900). It is nearly as common as

---

[1] At, Thousand Island Park, Jefferson County, last summer, the Purple Finches were very common and were observed to sing freely during the first two weeks of July, the length of a visit.

the Savannah Sparrow. At Peterboro, however, Mr. Miller took only one specimen during ten years' collecting.

15. **Zonotrichia albicollis.** WHITE-THROATED SPARROW.— Given in the list only as a "common transient visitant." Mr. Miller has found it breeding at two stations near Peterboro; and I have observed it to be common in shrubby half-cleared ground near Oneida Lake.

16. **Junco hyemalis.** JUNCO.— Recorded by Mr. Embody only as a visitant. Mr. Miller observes that the bird breeds "between Peterboro and Morrisville," as he has seen young scarcely able to fly. I have observed individuals on the hills near Oneida well along in May.

17. **Melospiza lincolni.** LINCOLN'S SPARROW.— Mentioned by Mr. Embody only in his hypothetic list. Mr. Miller reports having taken a specimen at Peterboro during spring migration.

18. **Pipilo erythrophthalmus.** TOWHEE.— Not mentioned. A single specimen was taken during spring migration near Oneida by Mr. Percy Klock, and Mr. Miller also took one at Peterboro. Mr. Egbert Bagg and the writer found the Towhee resident in low woods near Oneida Lake in Oneida County several years ago (see Auk, XVII, 178, 1900), and there is no doubt that the bird breeds also in similar situations a little farther along the shore within the limits of Madison County.

19. **Progne subis.** PURPLE MARTIN.— "Rarely seen," etc. Breeds at Oneida and seems to be holding its own against the English Sparrows. I took a set of 4 eggs from an electric arc lamp at Oneida, July 12, 1895.

20. **Stelgidopteryx serripennis.** ROUGH-WINGED SWALLOW.— Said to be "rarely seen," and three records given. According to Mr. Miller it is a "not uncommon summer resident near Peterboro."

21. **Vireo flavifrons.** YELLOW-THROATED VIREO.— "Listed as a not uncommon summer resident." Common in northern portion of the county where I have observed several nests. (See Osprey, New Series, I, 37–39, 1900.)

22. **Vireo solitarius.** BLUE-HEADED VIREO.— Given by Mr. Embody only in the hypothetic list. Mr. Miller states that it is common at Peterboro during migrations and that a few remain throughout the summer.

23. **Mniotilta varia.** BLACK AND WHITE WARBLER.— "Common transient visitant." Mr. Miller calls it a common breeder at Peterboro.

24. **Dendroica rara.** CERULEAN WARBLER.— "Rare summer resident," etc. There are earlier records than Mr. Embody's. See Auk, XVII, 178, 1900, where is recorded the discovery of a colony on the Stockbridge West Hill. I have often visited this colony. As late as July 22 (1902) many of the birds were still in song. Mr. Miller has taken a single specimen at Peterboro.

25. **Dendroica blackburniæ.** BLACKBURNIAN WARBLER.— Given only as a "common transient visitant." Mr. Miller states that the Blackburnian is "tolerably common" at Peterboro; and I have found it to be a regular but rather rare summer resident among hemlocks in mixed woods on the Stockbridge East Hills.

26. **Dendroica virens.** BLACK-THROATED GREEN WARBLER.— Recorded as "fairly common during migrations." It is, however, a not uncommon summer resident among the hemlocks in several localities in the northeastern part of the county. Mr. Miller states that it is common at Peterboro.

27. **Dendroica palmarum.** PALM WARBLER.— Mentioned only in hypothetic list. Mr. Miller calls it a not uncommon migrant at Peterboro.

28. **Geothlypis agilis.** CONNECTICUT WARBLER.— Not listed. A rare fall migrant at Peterboro, according to Mr. Miller.

29. **Geothlypis philadelphia.** MOURNING WARBLER.— Given as "a rather rare transient visitant. Occasionally seen during the summer." According to Mr. Miller it breeds rather commonly at Peterboro. I find it in high woods on the Stockbridge East Hills.

30. **Icteria virens.** CHAT.— Not listed. Mr. Miller has taken a single specimen at Peterboro.

31. **Wilsonia mitrata.** HOODED WARBLER.— "Rare. Two individuals seen May 29, 1900, one of which was captured, now in the writer's collection." The Hooded occurs as a regular (breeding) summer resident in the woods with the Cerulean on the Stockbridge West Hill where I found it first in 1896, subsequently in 1898 and 1900. (See Auk, XVII, 178, 1900.) Two specimens were taken; one, June 24, 1898, which is in my own collection; a second, adult female, June 15, 1900, now in the U. S. National Museum collection (No. 172461). Upon one of my visits in 1900 a partially fledged bird was seen with one parent. On July 22, 1902, an adult bird in song was seen again in the same restricted area where the previous ones were observed. Altitude about 1250 feet.

32. **Wilsonia canadensis.** CANADIAN WARBLER.— Put down as "not uncommon during migrations." Should be given as a not uncommon summer resident. Mr. Miller calls it common at Peterboro; but I have summer records from only two stations, both not far south of Oneida.

33. **Toxostoma rufum.** BROWN THRASHER.— Mr. Embody records a single specimen. The bird is rather rare in the northern part of the county, being most often seen in the lowlands toward Oneida Lake. Mr. Miller calls it an extremely rare migrant at Peterboro.

34. **Certhia familiaris americana.** BROWN CREEPER.—Mr. Embody's records indicate that it breeds near Hamilton, and according to Mr. Miller it breeds at Peterboro.

35. **Hylocichla guttata pallasii.** HERMIT THRUSH.— Given only as a common transient visitant, which would be my verdict. Mr. Miller, however, found it breeding commonly at Peterboro.

36. **Hylocichla alicæ.** GRAY-CHEEKED THRUSH.—Given only in the hypothetic list. Mr. Miller states that it is not an uncommon migrant at Peterboro.

NOTES ON WINTER CROW LIFE IN THE DELAWARE VALLEY.

BY WITMER STONE.

SOME years ago Messrs. Samuel N. Rhoads, Henry W. Fowler, and the writer became interested in collecting data relative to the winter habits and distribution of Crows in the lower Delaware Valley, especially with regard to the location of their roosts and the direction of their morning and evening lines of flight. As often happens circumstances prevented the completion of our work, and our notes have remained for a long while untouched. Upon looking them over with a view to continuing the main line of investigation I find some correlative material bearing upon the winter life of the crows of the vicinity of Philadelphia which, seems worthy of publication, and I present it here with due acknowledgments to my colleagues for their valuable aid in gathering the information together.

The immediate vicinity of the Delaware River, from some distance north of Philadelphia all the way to the bay, is a great rendezvous for winter crows. To the passengers on the ferryboats they are a familiar sight, as they mingle with the Herring Gulls, flapping low over the water to pick up such scraps as may go floating by or in more severe weather alighting on the grinding ice cakes, and walking about where the pack has been frozen solidly together.

On the broad meadows which line the shores of the river, both above and below the city, crows abound during the daytime and walk about in search of food until it is time to seek their roosts on the New Jersey side of the river, when the long straggling flights may be seen winging their way homeward, sometimes in the bright glow of a winter sunset, at others in the teeth of a blinding storm, but always stubbornly heading for the particular roosting ground that generations of ancestors have used before them.

It seems a pity that a bird whose habits present such an interesting and unique field for study should be subject to persecution, especially since the Department of Agriculture has shown that his good deeds in the destruction of insects quite equal his depreda-

tion and that if not positively beneficial he is at least "on the fence." Where the law does not stand in the way, however, man usually tries every path that leads to wealth and some enterprising individuals have, from time to time, made a fair profit by trapping these poor hungry winter crows to be used in lieu of pigeons in trap shooting contests.

In severe weather, when the ground is white with snow, the crows have a harder time than ever to secure a living, and hunger makes them comparatively tame, so that they fearlessly approach barn-yards, refuse dumps, and any apparent source of food. It is at such times that the trappers successfully ply their trade.

A piece of ground conveniently near a strip of woodland or fence row, and sufficiently cleared and open to attract the attention of the crows and allow free use of the net, is selected. A rough shelter is constructed for the concealment of the trapper, and near by a spring-pole about fifteen feet in length, is planted at such an angle that the free end is only about four feet from the ground. A similar pole is planted about forty yards off; between these and some distance behind them a row of stakes is driven into the ground, to which the net is attached. These are also provided with trigger releases which restrain the free edge of the net until the spring poles are liberated. The net is an ordinary shad sein, fourteen yards long and thirteen feet wide, and is attached to the spring poles at either end. When set for action the spring poles are bent back and the net is restrained by the triggers. It is then quite inconspicuous and can be almost entirely concealed by a sprinkling of grass. Pieces of horse flesh, which is preferred for bait on account of its toughness, are now scattered along between the poles and at the proper time the triggers and poles are simultaneously set free by a jerk on a rope that is held by the trapper, and the feeding crows are immediately covered and entangled in the meshes of the net.

Trapping is begun in November and continued until March whenever the conditions are favorable; one man often secures as many as five hundred birds in a season, and it is estimated that at least two thousand crows have been killed in one year to test the marksmanship of Philadelphia's trap shooters. The birds are sprung singly from ordinary pigeon traps at twenty to twenty-five

yards rise, the tails being docked about two inches to allow free action in the trap. The crows 'get off' more deliberately than pigeons but their flight is more erratic so that they prove harder to hit. About twenty per cent. usually escape from the grounds though many of these are badly wounded, and probably not five per cent. survive.

One of the most troublesome factors in crow trapping is the presence of hawks in the vicinity of the nets. These birds abound along the river marshes in winter, where they find quantities of Field Mice (*Microtus pennsylvanicus*) to prey upon and naturally in severe weather they take to the crow bait quite as readly as the crows themselves. As long as a hawk is there the crows will not remain on the ground long enough to justify a cast of the net, but continue to hover over and mob him until he is fairly settled at his feast, when they retire to the neighboring trees and await his departure, which is greeted with a rousing demonstration.

To rid themselves of this nuisance the trappers are compelled to net a number of hawks, nearly all of which prove to be the Red-shouldered Hawk (*Buteo lineatus*). This fact is interesting, as previous experience showed that nine tenths of the hawks *shot* on the Delaware meadows were the Red-tailed Hawk (*B. borealis*). A few of the latter species and one Black Hawk (*Archibuteo lagopus sancti-johannis*) have been netted.

Fortunately for the crows trapping can only be carried on successfully in winters when the ground is covered with snow for a considerable period. The abundance of the pigeon supply also materially affects the demand of crows, and these facts do not tend to draw a great many men to this interesting field of business. Furthermore, the temporary retirement of the chief crow trapper, who has been spending some time in jail — on another charge — has given the birds a respite of late, which we trust will continue.

One of the most interesting facts developed in the investigation of this crow trapping was that both the Fish Crows (*Corvus ossifragus*) and Common Crows (*C. americanus*) were caught in the same net, and that the former species was by no means rare, being clearly distinguished by both trappers and gunners under the name of Pigeon Crow and regarded as better for trap shooting than the larger species, since it was not necessary to 'dock' so much of the tail to get the birds in the traps.

An inspection of the barns and corncribs where the crows were confined until sold, showed that about one in five was of the smaller species. This is of course not an index of the relative proportion of the two species, but simply of those caught, and doubtless indicates that the Fish Crow was more susceptible to the allurements of the trapper than his larger brother. The abundance of the Fish Crow in winter on the meadows to the north of the city is interesting since, so far as Mr. Fowler has been able to ascertain, the species does not nest so far up the Delaware River. On the Tinicum meadows, below the city, it has frequently been reported as a summer resident, but careless observers and collectors have more than once confused the two species, and so far as my personal experience goes such nests as I have examined in this locality were unquestionably the property of *C. americanus*, though I am still of the opinion that the Fish Crow breeds their also, and that a colony of nests in the Lazaretto woods belongs to the latter species. Farther down the river the Fish Crow undoubtedly nests regularly as well as along the New Jersey coast, while of late years several pairs have occupied tall trees in the small parks in the heart of Philadelphia. The pair which have been domiciled in Logan Square, directly opposite the Academy of Natural Sciences, have been frequently observed and seem to be quite oblivious to their surroundings, feeding their young on the lower branches of the trees to the astonishment of the House Sparrows, and even making depredations upon the disarticulated skeletons which our taxidermist had put out on the roof to bleach.

Our observations would seem to indicate, that the Fish Crow is a resident species along the river but that it pushes farther north along the valley in severe winter than its normal breeding range extends. That it mingles much more with the Common Crow than some of the older writers would have us believe seems certain, although this may apply only to the district under consideration and similar spots where the ranges of the two overlap.

As the Fish Crow is not a very common species in collections, Mr. Fowler secured at my request a series of twenty-five specimens, all of which are now in the Academy's or in my own collection. The difference in color as compared with the Common Crow and the increased gloss of the plumage is constant through the whole

series. In size the largest Fish Crow fails to equal the smallest Common Crow, though exceptional examples approach more closely in dimensions of wing than is generally supposed. The bulk of the specimens, however, differ widely, and emphasize the distinctness of these two species. Indeed, to my mind it is the only distinct type of Crow in the United States apart from *C. americanus*, all the others, even *C. caurinus*, being apparently geographic derivatives of the latter. The measurements of twenty-five specimens are as follows:

Wing, 9.56–11.55; average, 10.68 ins.
Culmen, 1.41–1.63; average, 1.52 ins.
Bill from nostril, 1.02–1.20; average, 1.10 ins.

Some of the largest individuals are females, and there does not seem to be much difference in the average size of the two sexes.

A series of fifteen Common Crows from the same vicinity yields the following measurements, which will show the comparative dimensions of the two species as found in the Delaware Valley in winter.

Wing, 11.60–13.35; average, 12.28 ins.
Culmen, 1.75–2.03; average, 1.86 ins.
Bill from nostril, 1.25–1.52; average, 1.34 ins.

The average size of the skulls of the two species is as follows:

C. americanus, length, 3.58 ins.; greatest breadth, 1.48 ins.
C. ossifragus, length, 3.03 ins.; greatest breadth, 1.28 ins.

ON THE GENERIC NAMES OF THE NORTH AMERICAN OWLS.

BY WITMER STONE.

As is well known, there has been considerable difference of opinion among ornithologists as to what species of owl should be regarded as the type of the Linnæan genus *Strix*. In the A. O. U. Check-List the question was decided in favor of the Barn Owl, which consequently stands as *Strix flammea*. In 'The Auk' for January, 1900, p. 65, the late Dr. Coues raised the claim that when Brisson, in 1760, divided the Linnæan genus into *Strix* and *Asio* he fixed *Strix stridula* as the type of the former. This question has been before the A. O. U. Committee on Nomenclature ever since, and it was in the course of investigating into its merits that I discovered other complications in the nomenclature of our Owls, which have led to the present paper.

Before entering upon a general discussion of the subject I may say, that I can find no warrant for Dr. Coues's claim. Brisson simply gave generic names to the two groups of owls which Linnæus termed (under his genus *Strix*) '*auriculatæ*' and '*inauriculatæ*'; and gave no indication of a type. This fact seems to me perfectly clear, and were there no other questions involved the generic names of our owls would remain as at present. Unfortunately, however, such is not the case, and Dr. Coues's further claim that "the last word on the subject has not yet been said" is abundantly proven.

To begin at the beginning: Linnæus, in the 10th edition of his 'Systema,' included all the owls known to him in the genus *Strix*, arranging them in two groups as follows

AURICULATÆ.	INAURICULATÆ.
bubo.	*aluco* (=*flammea* of XII ed.).
scandiaca (doubtful).	*funerea* (doubtful).
asio.	*nyctea.*
otus.	*stridula.*
scops.	*ulula.*
	passerina.

These are all recognizable species except *scandiaca* and *funerea*, which have been usually dropped out of consideration as composite or doubtful.

As already stated, Brisson in 1760 gave names to these two groups, calling the eared owls *Asio* and restricting *Strix* to those without ears.

In 1799 Cuvier (Leçons d' Anat. Comp., Tab. II) did precisely the same thing, using the names *Otus* and *Strix* respectively; and in 1806 Duméril (Zool. Analytique, p. 34) again named the eared owls of Linnæus, calling them *Bubo*.

Hence we have three names coextensive and absolutely synonymous — *Asio* Brisson = *Otus* Cuvier = *Bubo* Duméril; and neither of the latter can be revived for any part of the original group included under *Asio*, *i.e.*, the *auriculatæ* of Linnæus (*cf.* Allen, discussion of the nomenclature of the genus *Dicotyles*, Bull. Am. Mus. Nat. Hist., XVI, 1902, p. 162). This disposes absolutely of *Bubo*, and I had supposed of *Otus* also, but Dr. Chas. W. Richmond calls my attention to the fact that Pennant had used the name *Otus* long before Cuvier, and upon looking up his 'Indian Zoölogy,' 1790, p. 34, we find a plate and description of "*Otus bakkamœna*." The identity of this bird has been somewhat in doubt, but the majority of writers have regarded it as the small screech owl of Ceylon and it has been so accepted by Blanford (Fauna of Brit. Ind., III, p. 297) and Sharpe (Hand List of Birds, I, p. 286), though neither of them seem to have realized that in so doing they were bound to adopt the generic name *Otus* for the Screech Owls.

The identification of Pennant's bird with the Barn Owl, which has been proposed by some, cannot be upheld, as the description and size are quite at variance with that species. This, moreover, would make the Barn Owl the type of *Otus* and leave the Snowy Owl as the type of *Strix!*

In the preface to Pennant's Indian Zoölogy of 1790 he states that there was an earlier edition published by Forster in 1781, but upon consulting this I find the bird under the name *Strix bakkamœna*. Both Sherburn and Blanford, however, quote a still earlier 1769 edition, in which the name *Otus* is used, so that we are apparently safe in accepting this as the date of the genus

Otus, though I have not personally been able to consult this edition.

The recognition of this early use of *Otus* fixes the name beyond question upon the Screech Owls and cancels the action of Savigny who, in 1809, established the genus *Scops* for these birds. It also avoids the controversy as to whether the use of *Scopus* Briss., 1760, for the Umbrette invalidates *Scops* of Savigny, a question upon which American and British authors have long been at variance.

With the Screech Owls *asio* and *scops* thus removed from the genus *Asio* of Brisson we have left only the species *bubo* and *otus*.

In 1815 Rafinesque (Analyse, p. 69) used the name *Bubotus*, but Dr. Richmond, who has examined a copy of this rare work in the Library of Congress, informs me that the name is "merely a new name or emendation of *Bubo* Duméril," and consequently falls with that.

In 1832 Wagler (Isis, p. 1221) proposed *Nyctalops* for his new species *N. stygius*. This bird is now regarded as congeneric with "*Asio otus*" (Linn.) Briss., and removing the latter to the genus *Nyctalops* we have left as the type of *Asio*, *Strix bubo* Linn.

It must not be thought that the Great Horned Owls were not provided with generic names, other than *Bubo* Duméril, which we have shown to be untenable, for we find three proposed in 1837, and others later. The former are

Ascalaphia Geoffr., Echo du Monde Savant, III, p. 4. (type *A. savignii* Geoffr. = *Bubo ascalaphus* Savign.).

Heliaptex Swains., Class. Birds, II, p. 217 (type *S. arctica* Swains. = *Bubo subarctica* Hoy).

Urrua Hodgs., Jour. As. Soc. Bengal, VI, p. 372 (type *V. cavearia* Hodgs. = *Otus bengalensis* Frankl.).

If my argument is correct, and *Strix bubo* is by elimination the type of *Asio* Brisson, we shall not have to consider these names at all, but I give them in order to complete the record. Moreover, they will probably not have to be considered in any case, since Swainson in the same year (1837) restricted *Asio* Brisson to the species *bubo* and *virginianus*, bringing us to the same point that I have reached by elimination.

If my views are adopted no change will be required in the genera of any of the 'earless' owls, while our 'eared' species will stand as follows:

FAMILY ASIONIDÆ.

Genus NYCTALOPS Wagler, 1832. Type *N. stygius* Wagl.
Asio Auct. (*nec* Brisson).
Otus Auct. (*nec* Pennant, *nec* Cuvier).

366. *Nyctalops wilsonianus* (Less.).
367. *Nyctalops accipitrinus* (Pall.).

Genus ASIO Brisson, 1760. Type *Strix bubo* Linn., by elimination
Otus Cuvier, 1799 (*nec* Pennant).
Bubo Duméril, 1806.
Bubotus Rafin., 1815.

375. *Asio virginianus* (Gmel.).
375*a*. *Asio v. pallescens* (Stone).
375*b*. *Asio v. subarcticus* (Hoy).
375*c*. *Asio v. saturatus* (Ridgw.).
375*d*. *Asio v. pacificus* (Cassin).

Genus OTUS Pennant, 1769. Type *O. bakkamœna* Penn.
Scops Savigny, 1809.
Megascops A. O. U. Check-List.

373. *Otus asio* (Linn.).
373*a*. *Otus a. floridanus* (Ridgw.).
373*b*. *Otus a. mccalli* (Cassin).
373*c*. *Otus a. bendirei* (Brewst.).
373*d*. *Otus a. kennicottii* (Elliot).
373*e*. *Otus a. maxwelliæ* (Ridgw.).
373*f*. *Otus a. cineraceus* (Ridgw.).
373*g*. *Otus a. aikeni* (Brewst.).
373*h*. *Otus a. macfarlanei* (Brewst.).
373.1. *Otus trichopsis* (Wagler.).
374. *Otus flammeola* (Kaup).
374*a*. *Otus flammeola idahoensis* (Merriam).

I regret very much to work such a revolution in the nomenclature of such well-known birds as these owls, but it seems to me after much careful study that these changes are inevitable if we follow the rules in our Code of Nomenclature, and I consider the sooner we have done with a disagreeable job the better.

It will be noticed that the alterations are due entirely to the discovery of the early use of the generic name *Otus* by Pennant and by the enforcement of the rule relating to synonyms in the case of *Bubo* Duméril. Had Dr. Bowdler Sharpe been aware of the former and realized the proper treatment of the latter case when he wrote his excellent review of the owls in 1875 (Ibis, p.

324) he must, I think, have reached the same conclusion that I have here presented.

A revision such as I have offered will inevitably be severely criticised by those who do not believe in any change in our nomenclature, but who do not offer any explanation as to how we are to arrive at a fixed system of names, without such change. When they ask, "Are we any nearer to stability than we were ten years ago?" I would answer, yes! There are obviously only a certain number of publications in which descriptions of genera and species occur, and with the invaluable works of reference that Mr. Sherburn is placing in our hands we shall soon be past the possibility of the resurrection of old names.

The reason that we have to make so many changes at the present time is simply because this phase of the subject has only recently attracted the attention of more than a very few workers. Why such wholesale criticism should be aimed at the revision of nomenclature I fail to see, when revision in classification, in any branch of natural science, is accepted as a matter of course. The changes in one field, since the time of Linnæus, are just as radical as in the other. When the anatomy and embryology of each member of a group is known, the classification will reach a definite basis; and when all the published names are found and interpreted the nomenclature will likewise be finally adjusted.

However, I fear that explanations will not be of much avail, except in the case of those who have been brought face to face with questions of this sort and have been compelled to make a decision; and I must confess that with these changes and others which have been elsewhere proposed in the case of certain of the earless owls, some of the pages of our Check-List will present a decidedly unfamiliar appearance. Indeed, there is danger that their contemplation may result, on the part of some of us, in actions which, according to Thomas Pennant, are characteristic of the owls themselves, for he tells us in his quaint 'Genera of Birds' (1781) that they are accustomed to wink in the day time, prey [pray?] in the evening, and snore loudly at night!

NOTES ON THE BIRDS OF THE CARIBOO DISTRICT, BRITISH COLUMBIA.

BY ALLAN BROOKS.

Plate X.

DESIRING to study the fauna of the northern interior of British Columbia, I spent fifteen months, from June, 1900, to October, 1901, in the Cariboo district, a large portion of the time being devoted entirely to collecting. The first eleven months were spent in the heavily timbered country in the northern portion of the district, Quesnelle Mouth, Willow River, and the mountains southeast of Barkerville. From May, 1901, till the following October I made my headquarters at the 158-Mile House, in the southwestern corner of the district, just north of the 52d parallel. Excursions were made from this point to the Chilcotin plateau, Lac la Hâche and Horsefly River.

The country around Quesnelle, on both banks of the Fraser, and north to Fort George, is entirely covered with forest, mostly coniferous, — spruce, balsam, Murray pine and Douglas fir, with a good deal of birch and poplar. The altitude of the Fraser at Quesnelle is 1600 feet.

The mountains in this region are mostly low, level plateaus, but towards Barkerville they merge into the Cariboo Range, rugged and snow-capped, with timber line at about 5500 feet.

Towards the southern portion of this range the climate becomes more humid and the valleys, such as the upper Horsefly, possess a forest growth very similar to that of the coast region, — hemlock, cedar, Douglas fir, yew, etc., with a heavy growth of underbrush, red dogwood, devil's club, etc.

The southwestern corner of the Cariboo district, like the Lilloet district to the southwest, is diversified with a good deal of open and partially timbered country; the 158-Mile House is situated on a plateau of about 3000 feet altitude (Carpenter's Mountain). Here there is a good deal of natural prairie, with numerous lakes and ponds, and scattered groves of timber and brush, the fauna and flora having many of the characteristics of the plains to the east of the Rockies.

The whole district has a very cold winter climate and a moderately warm summer. Mosquitoes and blackflies swarm, and bird-nesting in the swamps and woods is generally anything but a pleasure.

1. **Colymbus holbœllii**. HOLBŒLL'S GREBE.
2. **Colymbus auritus**. HORNED GREBE.

Both these grebes were abundant, breeding on nearly every pond and lake. The larger species wages incessant war upon the smaller one, the larger birds diving and coming up beneath the smaller ones time and again to the terror of the poor little fellows, who often desert their nests in consequence.

3. **Podilymbus podiceps**. PIED-BILLED GREBE. — Rare.

I kept a good lookout for the Western Grebe (*Æchmophorus occidentalis*), but never saw one, not even during migrations. Their line of migration is probably straight eastward from southern British Columbia, where they are common.

4. **Gavia imber**. LOON. — Abundant; the only species of loon observed.
5. **Larus philadelphia**. BONAPARTE'S GULL. — The only gull observed during the breeding season. Breeds in the neighborhood of Quesnelle Lake.
6. **Merganser americanus**. AMERICAN MERGANSER. — Breeding on the streams and the larger lakes but absent from the smaller lakes that are devoid of fish.
7. **Lophodytes cucullatus**. HOODED MERGANSER. — Scarce.
8. **Anas boschas**. MALLARD.
9. **Mareca americana**. BALDPATE.
10. **Nettion carolinensis**. GREEN-WINGED TEAL.

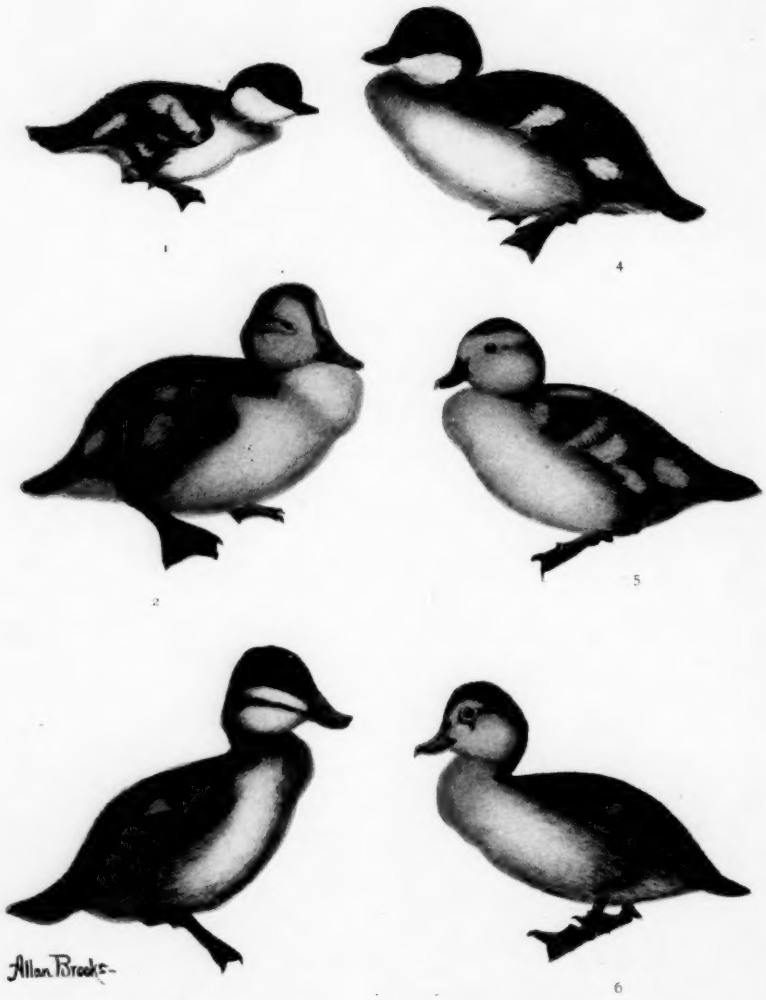
These three species are all abundant breeders.

11. **Querquedula discors**. BLUE-WINGED TEAL.
12. **Spatula clypeata**. SHOVELLER.
13. **Dafila acuta**. PINTAIL.

These three ducks are rather scarce breeders in the neighborhood of 158-Mile House.

I did not observe the Gadwall, the Cinnamon Teal, nor the Redhead, which are probably not found north of Lac la Hâche.

14. **Aythya vallisneria**. CANVAS-BACK. — Common breeder. The nests are bulky platforms of reeds, similar to a Coot's, found generally on small swampy ponds, away from the larger lakes, where the males associate in flocks. Eggs were taken from 21st of May to 6th June.
15. **Aythya marila**. SCAUP DUCK. — Observed only during its migrations.
16. **Aythya affinis**. LESSER SCAUP DUCK. — Abundant, breeding much later than the Canvas-back or Ring-necked. The nests were



YOUNG DUCKS.

1. Charitonetta albeola.
2. Aythya vallisneria.
3. Erismatura jamaicensis.
4. Glaucionetta islandica.
5. Aythya collaris.
6. Aythya affinis.

usually in coarse grass, with a waterway, generally a muskrat's runway, connecting with the nearest open water. Clutches varied from seven to eleven eggs each. First eggs taken on 21st June.

17. **Aythya collaris.** RING-NECKED DUCK.— A rather scarce breeder. I was able to take only one set of eggs, evidently a second laying, as there was no down. This was on the 27th June. The nest was in a tussock of grass, in eight inches of water; it was composed of coarse green grass and arched over with the drooping blades of the tussock. The nine eggs contained small embryos.

Young broods of this species were observed before the Lesser Scaups (*A. affinis*) had started to lay. The young in down are very light colored, resembling the young of the Canvasback and Redhead, and quite different from the dusky, unspotted young of the Lesser Scaup. (See Pl. X.)

18. **Clangula clangula americana.** AMERICAN GOLDEN-EYE.— Common during migrations, but not observed during the breeding season.

19. **Clangula islandica.** BARROW'S GOLDEN-EYE.—A rather scarce breeder in the neighborhood of 158-Mile House, but common in La Hâche Valley. One set of eggs was taken from a hole in a dead Douglas fir, fifty feet from the ground, probably the deserted nest of a flying squirrel. The tree stood about four hundred yards from the nearest water. The eggs (seven) at this date (17th June) contained large embryos. I saw another nesting hole but was unable to reach it. The female brought fourteen young ones out from this.

20. **Charitonetta albeola.** BUFFLE-HEAD.— Almost every lake has one or more pairs of these charming little ducks. Unlike Barrow's Goldeneye, the nests were always in trees close to, or but a short distance away from water. These nests were invariably the deserted nesting holes of flickers, and in most cases had been used several years in succession by the ducks. The holes were in aspen trees, from five to twenty feet from the ground, and the entrance was not more than three and a quarter inches in diameter. The number of eggs ranged from two to nine, eight being the average; in color they resemble old ivory, without any tinge of green. I have several times seen the eggs of this duck described as "dusky green," but these have evidently been the eggs of some species of Teal. The female Bufflehead is a very close sitter, never leaving the nest until the hole was sawed out, and in most cases I had to lift the bird and throw her up in the air, when she would make a bee-line for the nearest lake, where her mate would be slowly swimming up and down unconscious of the violation of his home. In many cases the eggs had fine cracks, evidently made by the compression of the bird's body when entering the small aperture.

21. **Harelda hyemalis.** OLD-SQUAW.— Common on the larger lakes, but by June they had all gone North, with the exception of a single female which remained on a small lake near the 158-Mile House throughout the summer.

22. **Histrionicus histrionicus.** HARLEQUIN DUCK. — A scarce summer resident on some of the mountain streams.

23. **Oidemia deglandi.** WHITE-WINGED SCOTER. — Numbers of these scoters remained on the larger lakes near the 158-Mile House throughout the summer, and to all appearances they were paired and breeding, yet I never found a nest, nor saw any broods of young.

24. **Oidemia perspicillata.** SURF SCOTER. — Seen throughout the summer but does not breed.

25. **Erismatura jamaicensis.** RUDDY DUCK. — A common breeder. While watching the curious antics of the males, through a binocular at very close range, I was struck with the peculiar formation of the head, there being distinct elevations over each eye resembling those of a frog. These were evidently caused by inflation from the inside of the skin. Young when first hatched are, as might be expected, very large, and dive for their food, unlike all other young ducks, which take their food from the surface for several weeks.

26. **Branta canadensis.** CANADA GOOSE. — Common. This is the only goose that breeds in Cariboo, Chilcotin, etc. I failed to find any evidence of the breeding of Hutchins's Goose, and all residents whom I questioned asserted positively that they had never seen any of the smaller geese breeding, though a few may remain through the summer, as they do in southern British Columbia, evidently non-breeding birds.

Many sets of the eggs of Canada Geese are taken and set under hens; these often produce undersized birds, which has led to the statement, so often made, of the breeding of Hutchins's Goose in British Columbia.

27. **Olor buccinator.** TRUMPETER SWAN. — Swans of this species breed in northern Chilcotin.

28. **Botaurus lentiginosus.** AMERICAN BITTERN. — Breeds in the southern portion of the district.

29. **Grus mexicana.** SANDHILL CRANE. — Breeds in suitable localities. The smaller species (*G. canadensis*) passes through on migrations only.

30. **Rallus virginianus.** VIRGINIA RAIL.

31. **Porzana carolina.** SORA.

32. **Fulica americana.** AMERICAN COOT.

All three are common and breed.

33. **Phalaropus lobatus.** NORTHERN PHALAROPE. — This phalarope may breed in northern Chilcotin, though I could find no evidence of its doing so near the 158 Mile House.

34. **Gallinago delicata.** WILSON'S SNIPE. — Common summer resident.

35. **Tringa maculata.** PECTORAL SANDPIPER.

36. **Tringa minutilla.** LEAST SANDPIPER.

These two sandpipers were frequently seen throughout the summer, but were evidently non-breeding birds.

37. **Tringa bairdii.** BAIRD'S SANDPIPER.

38. **Ereunetes pusillus.** SEMIPALMATED SANDPIPER.

39. **Calidris arenaria.** SANDERLING.

All were taken at Quesnelle during migrations.

40. **Totanus melanoleucus.** GREATER YELLOW-LEGS. — Breeding in many localities but all efforts to find the nest were unsuccessful, owing to the extreme watchfulness of the male bird, which kept constant watch from the extreme summit of some tall spruce. Young were first observed on 15th June.

41. **Helodromas solitarius cinnamomeus.** WESTERN SOLITARY SANDPIPER. — I think the Solitary Sandpiper breeds in the district, as I took young with the down still adhering to their plumage.

42. **Bartramia longicauda.** BARTRAMIAN SANDPIPER. — Frequently seen on both spring and autumn migrations. Mr. Sidney Williams took one specimen at Quesnelle and I shot another at the 158-Mile House.

43. **Actitis macularia.** SPOTTED SANDPIPER. — Common breeder.

44. **Numenius longirostris.** LONG-BILLED CURLEW. — Breeding in the La Hâche valley, but not observed in the Cariboo district proper.

45. **Squatarola squatarola.** BLACK-BELLIED PLOVER.

46. **Charadrius dominicus.** AMERICAN GOLDEN PLOVER. — Seen only during fall migrations.

47. **Ægialitis vocifera.** KILLDEER. — Common, breeds.

48. **Dendragapus obscurus richardsonii.** RICHARDSON'S GROUSE. — Common in partially wooded country in La Hâche valley, Chilcotin, and at Soda Creek, and again on the summits of the mountains of the Cariboo Range, but not in the intervening heavily wooded country. All those secured showed faint traces of a terminal tail bar.

49. **Canachites franklinii.** FRANKLIN'S GROUSE. — Abundant in all suitable localities. Towards the northern portion of the district many show an approach to typical *canadensis.*

50. **Bonasa umbellus togata.** CANADIAN RUFFED GROUSE.

51. **Bonasa umbellus umbelloides.** GRAY RUFFED GROUSE.

Most of the Ruffed Grouse of the district are intermediate between these two races, but ultra-typical examples of each were taken.

52. **Lagopus leucurus.** WHITE-TAILED PTARMIGAN. — The only Ptarmigan observed. I could find no record of *L. rupestris*, although it occurs further south.

53. **Pediæcetes phasianellus columbianus.** COLUMBIAN SHARP-TAILED GROUSE. — Abundant at 158-Mile House; scarce at Quesnelle. Those taken at the latter locality show a close approach to typical *phasianellus.*

54. **Zenaidura macroura.** MOURNING DOVE. — Scarce; in the southern portion of the district only.

55. **Nyctala tengmalmi richardsoni.** RICHARDSON'S OWL. — Quesnelle.

56. **Glaucidium gnoma californicum.** CALIFORNIA PYGMY OWL. — Taken as far north as Willow River.

57. **Dryobates villosus leucomelas.** NORTHERN HAIRY WOODPECKER. — Common at Quesnelle and in the mountains.

58. **Dryobates villosus hyloscopus.** CABANIS'S WOODPECKER. — Breeding at 158-Mile House.

59. **Dryobates pubescens homorus.** BATCHELDER'S WOODPECKER. —Scarce; not observed during the winter months.

60. **Picoides arcticus.** ARCTIC THREE-TOED WOODPECKER.— Not uncommon. As far as could be judged without actual comparison, all the specimens taken were fully as large as eastern birds. The subspecies lately described by Mr. Outram Bangs occurs in the Okanagan district to the southward.

61. **Picoides americanus.**— Taken from Willow River to Clinton; breeds throughout this region.

62. **Sphyrapicus varius nuchalis.** RED-NAPED SAPSUCKER.— Common summer resident.

63. **Ceophlœus pileatus.** PILEATED WOODPECKER.— Resident; observed as far north as Willow River.

64. **Colaptes auratus.** FLICKER.

65. **Colaptes cafer collaris.** RED-SHAFTED FLICKER.

In the neighborhood of the 158-Mile House both species occur and interbreed. From one nest hole I took seven nestlings, which varied from typical *cafer collaris* to nearly typical *auratus*.

66. **Cypseloides niger.** BLACK SWIFT.— Observed in the southern portion of the district.

67. **Selasphorus alleni.** ALLEN'S HUMMINGBIRD.— Breeding near 158-Mile House.

68. **Stellula calliope.** CALLIOPE HUMMINGBIRD.— Breeding in the mountains west of Clinton in the Lilloet district.

69. **Empidonax traillii alnorum.** ALDER FLYCATCHER.— Breeding birds taken at Quesnelle were closer to *alnorum* than to typical *traillii*; the latter is the species breeding in the southern portion of the district.

70. **Otocoris alpestris leucolæma.** PALLID HORNED LARK.— Breeding above timber line near Barkerville. The spotted young are darker in coloration than would be expected from the color of the adult.

71. **Otocoris alpestris merrillii.** DUSKY HORNED LARK.— Breeding on Chilcotin plateau.

72. **Xanthocephalus xanthocephalus.** YELLOW-HEADED BLACKBIRD. —Noticed only at 158-Mile House, as a straggler.

73. **Carpodacus cassini.** CASSIN'S PURPLE FINCH.— Summer resident at Soda Creek, and probably also at Quesnelle.

74. **Leucosticte tephrocotis.** GRAY-CROWNED LEUCOSTICTE.— Breeding above timber line near Barkerville. The young were fully fledged the last week in July.

75. **Leucosticte tephrocotis littoralis.** HEPBURN'S LEUCOSTICTE.— After identifying the typical species as the species breeding in the district, I was surprised to find *littoralis* the common winter visitant around Quesnelle, where no *tephrocotis* were then seen.

76. **Acanthis hornemannii exilipes.** HOARY REDPOLL.— I took one nearly typical example at Quesnelle, and also have several taken by Mr. Sidney Williams at that place.

77. **Pocœcetes gramineus.** VESPER SPARROW.— The Vesper Sparrows of Cariboo seem closer to the typical species than to either of the subspecies *affinis* or *confinis*. They were common at 158-Mile House, and were also breeding at timber line near Barkerville.

78. **Ammodramus sandwichensis?** — The Savanna Sparrows of Cariboo belong to the large, small-billed race, found throughout the interior of British Columbia, and are quite distinct from the small gray form breeding in the Lower Fraser Valley and generally identified as *alaudinus*. I suspect the former is closer to *alaudinus* and that the latter is an undescribed subspecies.

79. **Spizella monticola ochracea.** WESTERN TREE SPARROW. — Breeding near Barkerville.

80. **Spizella breweri.** BREWER'S SPARROW. — Two males taken at 158-Mile House, 3d July, 1901.

81. **Melospiza lincolni striata.** FORBUSH'S SPARROW. — Tolerably common breeder; one set of five eggs taken at 158-Mile House, 5th June.

82. **Ampelis garrulus.** BOHEMIAN WAXWING. — Breeding from 158-Mile House northward. I arrived at Quesnelle too late for eggs, but kept a sharp lookout for Waxwings the following spring at 158-Mile House. I first noticed them there on 11th June, when I came across a small flock and shot one which proved on dissection to be a female about to lay. On returning to the same spot I found the Waxwings, consisting of a colony of five pairs of birds, still there, and soon discovered a nest in a Murray pine, near the end of a limb and about twenty-five feet up, this then (12th June) contained two eggs. On the 15th I took this set, which then consisted of four eggs. The nest was loose and bulky, composed of Usnea moss, dry grass and weed stems, and lined with fine material, with a few green aspen leaves in the lining, no doubt to render the eggs less conspicuous. On the 26th June I carefully looked over all the trees in the neighborhood with my binocular, and found three more nests, all in tall Douglas fir trees; two of these I was able to climb to; each contained four eggs within a few days of hatching. The nests were similar to the first but without the green aspen leaves, probably due to the fact that the nests were better concealed from above. I was unable to reach the fourth nest, nor could I find that of the remaining pair of birds.

83. **Ampelis cedrorum.** CEDAR WAXWING. — Not observed at 158-Mile House, but found breeding at Quesnelle, where it evidently laid its eggs later than the larger species.

84. **Helminthophila celata.** ORANGE-CROWNED WARBLER. — A scarce summer resident; specimens of old and young birds showed this to be the typical *celata* and not *lutescens*.

85. **Helminthophila peregrina.** TENNESSEE WARBLER. — This was a common breeder at 158-Mile House, where its sharp insistent song was to be heard from every copse in the partially wooded district. An account of its nesting has already been given in 'The Auk' for January, 1902 (Vol. XIX, pp. 88, 89).

86. **Dendroica auduboni.** AUDUBON'S WARBLER. — Tolerably common breeder.

87. **Dendroica maculosa.** MAGNOLIA WARBLER. — Several seen at Quesnelle during fall migration.

88. **Dendroica striata.** BLACK-POLL WARBLER. — I shot a Black-poll Warbler in the first plumage at Quesnelle but was unable to find it in the thick brush. I am very well acquainted with the species and am positive of the identity, as when first seen the bird was within five feet of me, and I had a good look at it.

89. **Sieurus noveboracensis notabilis.** GRINNELL'S WATER-THRUSH. — Breeding at Quesnelle, and less commonly at 158-Mile House.

90. **Setophaga ruticilla.** AMERICAN REDSTART. — Breeding throughout the district.

91. **Galeoscoptes carolinensis.** CATBIRD. — Breeding as far north as Soda Creek.

92. **Regulus calendula.** RUBY-CROWNED KINGLET. — Breeding near 158-Mile House. On the 11th June I found a nest in a small spruce not four feet high; the nest was close to the stem and about two feet from the ground; it was a very deep cup, almost a vertical cylinder. The sitting bird must have been entirely concealed. It contained five eggs, a sixth imperfect one was sticking in the foundation of the nest; it had evidently been pushed through the lining and a fresh floor built over it.

The owners were raising a great outcry over the intrusion of a wandering brood of Whiskey Jacks; two grouse feathers were carefully put over the entrance to the nest, which made me think that it had been rifled by the jays and the lining pulled out.

93. **Hylocichla ustulata swainsoni.** OLIVE-BACKED THRUSH. — A common breeder from Clinton to Quesnelle.

94. **Hylocichla guttata pallasii** HERMIT THRUSH. — This was the form of Hermit Thrush occurring at Quesnelle; a skin from 158-Mile House seems closer to the typical form.

NOTES ON THE HABITS OF CERTAIN VENEZUELAN BIRDS.

BY AUSTIN H. CLARK.

IN 'THE AUK' for July, 1902 (Vol. XIX, pp. 258-267), I published a list of the birds of Margarita Island, Venezuela, based on a collection made by myself in that locality in the summer of 1901. During my stay on the island, as well as while at various towns on the mainland, I took copious notes on the habits of the different species, which lack of space prevented my giving, at that time, in as much detail as I would have desired. In view of the fact that so few people ever visit this part of the world, or ever see these birds under the conditions which pertain there, I shall take this opportunity of selecting the most interesting from among them, and giving a brief sketch of their peculiarities, treating them in the order in which they were given in the list.

The Booby Gannet (*Sula sula* Linn.) was one of the commonest sea-birds at the time of my visit. The first were observed far out in the Caribbean; and on nearing the South American coast, little companies of half a dozen or so became rather frequent. But in no place did I see them so abundant as in the channel between Margarita and the mainland, and, at certain times, about Carúpano. They seemed to approach the land solely for the purpose of feeding, after which they withdrew to open water. Just off Carúpano there was a certain spot to which every day came hundreds of sea-birds of many species to fish. Over one half of this congregation were common Brown Pelicans (*Pelecanus fuscus* Linn.), and most of the rest were these gannets. Overhead soared a score or more Frigate Birds (*Fregata aquila* Linn.), while various gulls and terns composed the remainder. All the larger members of this vast flock acted in perfect unison, wheeling about until a sufficient altitude was obtained, all diving with a great splash, then all slowly rising again to repeat the performance. Every now and then a Frigate Bird would come swooping down upon some hapless gull. I was much puzzled, at first, to find a plausible explanation for the fact that, day after day, the birds collected in practically the same spot to feed. The water there

was fully as deep as in the surrounding parts, and, from the land, no difference whatever was discernible. I thought I had found a possible clue to the mystery one day, while I was watching some boys fishing off the end of the wharf. Every few minutes some fish or other, most often a sea-catfish (*Galeichthys*) would rise to the surface, feebly struggling, to be almost instantly gobbled by some watchful gull or Frigate Bird. I obtained a couple of these fish, but could find no marks whatever on them to indicate in what manner they had been disabled. The inhabitants told me that at certain times fish run ashore here by the cart-load, and say it is due to the larger fish driving them in; but the United States vice-consul at Carúpano, Señor Orsini, believes that the real cause is the escape of sulphurous fumes through some crevice in the sea bottom, tainting the water so as to make it poisonous for the fish, which, to escape death from suffocation, run ashore. As the whole country about the town is very rich in sulphur, such an explanation seems highly probable; and it may well be that under the spot where the sea-birds congregate, coming to it from miles up and down the coast, there is some sulphur spring or temporary opening slowly giving out some volcanic gas or other which disables the fish. Unfortunately I could not visit the spot to test the truth of my theory; but I took several catfish which I found one day washing up on the beach, and carried them to a salt lagoon, entirely cut off from the sea. When placed in this, they immediately swam to the bottom, and I saw them no more.

Single boobies may often be seen fishing in company with solitary pelicans, imitating in every way the actions of their larger companions, diving at the same time, and rising simultaneously. Mr. Outram Bangs has suggested to me that perhaps the booby, being smaller and more active, finds a good fare in the fish which the uncouth pelican fails to catch. Just before dark, the gannets retreat to the channel between Margarita and the mainland, and fly about, uttering a peculiar note midway between a caw and a quack. They are unsuspicious, and pay no attention whatever to a boat, resembling pelicans in this respect; but they are not so readily caught by means of a hook and line as the latter. Directly east of Margarita there is a large rock, rising to a considerable

height above the surface of the sea. My attention was drawn to it from the fact that the few White Boobies (? *Sula piscator* Vieill.) seen seemed to come from that direction. An examination of this rock in early spring might yield interesting results in regard to the breeding of many of the sea-birds of this region.

A bird which claims our attention from its great abundance and large size, is the Black Vulture (*Catharista urubu* Vieill.). You are almost never out of sight of one, while they congregate by thousands about the cities, soaring overhead, or perched on the house-tops. The poorer quarter of Carácas is a favorite rendezvous for these birds, attracted thither, doubtless, by the unrivaled assortment of foul odors to be found there, as well as by the prospects of rich and bounteous repasts. Near Carúpano they were strangely scarce, due to the generally clean and wholesome condition of the town. On Margarita they were quite common, soaring about over the hillsides, generally keeping near the ground, and collecting by the score on the beaches to feed on the dead dogs which were continually floating in, as a result of a war of extermination made on canines during my visit. They are quarrelsome birds, using both claws and beak on an adversary; and I once saw one fatally hurt by others in a fight over the eyes of a dog which had just washed up on the beach near Porlamar. In the town of Port-of-Spain, on the English island of Trinidad, where 'corbeaus' are strictly protected by law, they are especially abundant, and may be seen at all times, walking about the streets, as tame as are English Sparrows in our cities. In fact, so highly do the people of Trinidad esteem the vultures as scavengers, that many crimes which are regarded as serious in our ideas of justice are punished less severely than the killing or injuring of one of these birds. In Port-of-Spain it is a common sight to see a vulture with one of its feet crippled from having been stepped on or run over while engaged in a contest with others over a bit of offal.

Perhaps the most characteristic bird of the coast region of Margarita, certainly the one which most surely claims the attention of the traveler unused to the American tropics, is the Parrakeet (*Conurus æruginosus* Linn.). One is never out of hearing of their incessant noise while near the coast, and little flocks of a dozen

to twenty are continually passing and repassing. They have two traits which are more or less common to all the group: they become instantly quiet and motionless on alighting, and are therefore very hard to locate in a tree; and they show great solicitude for a comrade in distress. I had been on Margarita a couple of weeks before I was able to secure a specimen, in spite of their abundance, so restless are they; but at last I succeeded, by dint of skilful manœuvreing, in wounding one, which came fluttering down, square onto a 'tuna' bush, on which it was impaled, struggling and screeching. The remainder of the flock, about a dozen in all, immediately descended, and hovered about their unfortunate companion, some alighting on the ground, and others in a neighboring thorn tree, displaying as much anxiety as a robin does, when some intruder is in the vicinity of her nest. In fact, so unsuspicious were they, and so heedless of my presence, that I secured eight and could have got others, had I been able to care for them properly.

Perhaps I might add parenthetically an item in regard to these eight parrakeets, which illustrates one of the inconveniences of tropical collecting. I took them back to El Valle, the little town in which I was staying, together with four Burrowing Owls (*Speotyto brachyptera* Richm.), a White-tailed Buzzard (*Buteo albicaudatus* Vieill.), and a number of shore-birds and terns. As I had had no food since early morning (it was then the middle of the afternoon) and had passed a particularly trying day, walking many miles over shadeless, scorching sand, I thought that I would eat a light repast and take a short nap before skinning my trophies. In about half an hour I arose, and was much interested, as well as surprised, to see a long line of feathers, green, brown, gray, and white, moving along close to the wall, and disappearing into a hole. Investigation revealed the fact that the motive force behind each feather was a small ant. A hasty examination of my specimens showed me that seven of my parrakeets were so denuded as to be useless, all the owls were ruined, and the water birds were so greasy as to be unfit for preservation; the hawk, also, had begun to decay. After this rather severe experience, I never rested until the results of my day's collecting had been put in order, and out of the reach of these interesting, but obnoxious insects.

In the forest, replacing the parrakeet of the coast region, we get the large green Amazonian Parrot. This bird is common, and very noisy, its cry resembling the word *loro*, by which name it is known to the natives. When flying, from its great breadth of wing, it seems to lack both head and tail, being apparently of the same width from one wing tip to the other. Although of some size, it is a difficult bird to see, owing to its color, and its adroitness at concealing itself. If it were not for its continuous racket, it would often escape detection.

At Carúpano I had the opportunity of observing some very small parrakeets, about the size of an English sparrow. They were regular visitors in the courtyard of the hotel, and could be seen occasionally in the outskirts of the town. Their habits were quite sparrow-like, both in searching for food, and when flying. I was informed here, and had it confirmed at Trinidad, that they were abundant a few miles back from the coast. There is a more or less traveled route from Carúpano to Ciudad Bolivar, passing through the barren hill region of the coast, and then crossing the great "wilderness" which borders the Orinoco. Along this trail, large mammals of many species are common, such as the jaguar, puma, and ocelot, and macaws, toucans, many parrots, and numbers of other birds are abundant. From what I was able to learn, this would be a most interesting, as well as profitable trip for some ornithologist with leisure and an inclination for new experiences. It takes a little over two weeks, and is performed by means of mules and burros. The United States consul at La Guaira told me that, had he a knowledge of taxidermy, he could do a great deal for science by preserving the many curious mammals and birds which were brought to him out of this little explored region.

We have no bird, which, for pure foolishness and general lack of spirit, can be compared with the Two-banded Puff-bird (*Bucco bicinctus* Gould). Resembling somewhat, with its large beak and dark breast bands, a clumsy kingfisher, it can be approached very closely without taking alarm; and when it does fly, it merely goes to the nearest available tree or bush and awaits the second approach of the intruder. Even when shot at, it flies only a few yards, and then alights, inviting its pursuer to try again. Sometimes it does not fly at all, but remains stupidly staring at the cause of the

disturbance, until you either take pity on its idiocy, or kill it. I have shot two of them, perched near together, the second not being moved in the slightest degree by the death of the first. Sometimes, indeed, when out collecting with native boys, I have refused to shoot a puff-bird, whereupon they would attack it with stones, on a few occasions actually succeeding in killing it without causing it to take alarm. This bird is provided with a couple of blunt spurs on its wrists, with which it might possibly give one an unpleasant surprise; but I never saw an individual attempt to use them, as when wounded, no matter how slightly, they always seem quite resigned, and do not struggle as would a robin or blue-jay under similar circumstances.

Bonaparte's Woodpecker (*Melanerpes subelegans* Bon.) is an abundant bird on Margarita, and one can almost always hear it at a greater or less distance. Its cry is a loud rattle, peculiarly harsh and grating, which gets to be quite monotonous on short acquaintance. In spite of its abundance, I had a hard time getting specimens, as it seems to be difficult to kill; so much so, in fact, that it was one of the last birds added to my list. Their nests are commonly constructed high up in the cocoanut palms.

The little Buff-breasted Hummingbird (*Doleromya pallida* Richm.) is sure to force itself upon one's attention by means of its strikingly loud voice. Just before dark, their notes, with a peculiar metallic quality, can be heard coming from the thick scrub on the hillsides. A close approach reveals the songster, perched upon some prominent twig. Here he sits, until some rival flies up and drives him off. He generally has not long to wait, as these, in common with many other hummingbirds, are very pugnacious.

During my stay on the island, I discovered a nest of Alice's Hummingbird (*Amazilia aliciæ* Richm.), neatly constructed after the manner of the red-eyed vireo; but while I was engaged in getting some means by which to reach it, my native companions, thinking I had left it, took the opportunity of testing their skill at stone-throwing, with the result that the nest was totally destroyed, and the bird killed. The boys also found some nests of Atala's Emerald (*Chlorostilbon caribbæa* Lawr.), but I was not fortunate enough to do so. The birds were, in two cases, readily captured.

Of all the feathered tribe on the island, the Lance-tailed Manakin (*Cheiroxiphia lanceolata* Wagl.) seemed to me the most pleasing and generally attractive. Occurring in the mountain forest, its clear whistle is a distinctive feature of this part of the country. The natives call it "tintoro" which is a very good rendering of its note; the first syllable being moderately high, the next medium, with a rising inflection, the last low. Owing to the thick undergrowth and miserable footing in the deep woods on Margarita, I had some trouble at first to secure specimens, as everything naturally fled at my painfully noisy approach, until I tried imitating their song, which was very successful. I found two nests in the forest, both about five feet from the ground, one built after the manner of an orchard oriole, and the other a loose structure like that of a rose-breasted grosbeak. Both contained four eggs, resembling those of a scarlet tanager, but somewhat lighter in color. As no birds could be found in their vicinity, I did not disturb them; but from Capt. Robinson's description of a nest of this species which he found at La Guaira, I judged that one of these, if not both, belonged to this bird.

A surprise is in store for the novice when he first meets with the Barred Ant-shrike (*Thamnophilus doliatus* Linn.). One day, shortly after my arrival, while wandering about in the deep woods, I heard a cawing in the distance. Hoping to add some jay or other corvine bird to the fauna of the island, I carefully crept to the spot whence the sound proceeded, only to find that a solitary ant-shrike had been making all the disturbance. These birds sit very erect, resembling, with their long crests, our cedar waxwing.

The Creeper (*Dendroplex longirostris* Richm.), colored after the fashion of the Common Dipper (*Cinclus cinclus* Linn.) is a very different bird in life from what one supposes from an examination of specimens in collections. As a rule they are mounted in museums on T perches, which gives them, except for their beaks, the general appearance of some peculiar thrush. But in reality, they never, as far as my experience goes, assume that position, acting more nearly like large nuthatches than anything else. Their cry is a rattle like that of the belted kingfisher, but harsher and more grating. They nest in the post-cactus.

One of the most brilliant of the common birds was the large

oriole known as the Troupial (*Icterus icterus* Linn.). They were particularly noticeable in the hot coast region, where they were a welcome offset to the discouraging presence of the black vulture. Their loud but cheerful song consists of three notes, the first rather low, the second high, and the third intermediate. The word "troupial" accented on the middle syllable is a good onomatopoetic rendering of it. I was unable to find their nests.

Another common bird, resembling the troupial in many ways, although less energetic, is the Margaritan Oriole (*Icterus xanthornus heliocides* Clark). This bird has precisely the same notes as the other but less loud, and pitched a trifle higher. The males seemed to me to be considerably brighter and more strongly orange than any I had ever seen in collections, an observation which was found to be true on comparing my specimens with others from different localities. Their nests are commonly seen constructed after the manner of those of our common oriole, and placed near the tip of the long cocoanut fronds.

The lagoons bordering the island, especially a few miles to the eastward of Porlamar, formed the abiding place of many shore birds and terns, while on the edges of the mangrove swamps herons of many species could be seen. The commonest of the terns was a large one which I took to be the Sooty Tern (*Sterna fuliginosa* Gmel.). This was seen in immense flocks, wheeling about over the shallow water, showing now black, now white, according as their white breasts or black backs were visible. I also met with them afterwards at different places among the West Indies, but never in such numbers as at Margarita.

One day while on the sandy plain near the coast, my attention was attracted by a flock of about twenty very large birds, in the form of a wedge flying in the direction of the lagoon which separates the two parts of the island. Their size and actions suggested geese; and it occurred to me that perhaps they were flamingoes. Although these birds have never been recorded from this locality the central lagoon and mangrove swamp seem to furnish a good situation for them, and I should not be surprised if at some future time specimens of them are obtained there.

There was one other problem connected with the bird fauna of Margarita which I was unable to solve. Near the top of a high

spur of the central mountain just south of El Valle, there was a large cave, consisting of a spacious chamber, with an entrance about ten feet in diameter, and two shafts, one leading directly up through the roof, and the other slanting. The only inhabitants were a number of small bats (belonging to the genera *Peropteryx*, *Micronycteris*, and *Glossophaga*). The whole floor was covered with the skeletons of small birds and mammals, the larger part being those of the small doves. I recognized also Bonaparte's woodpecker among them, and in addition the remains of a murine opossum (? *Marmosa robinsoni* Bangs) and some small rodent. The question arose, what brought them there? The cave was high above any place where these forms could be found commonly, if at all, and no birds but vultures were seen in the vicinity; neither were there any traces of owls having lived here. The remains must have been accumulating for many years, as in some places they were over an inch deep, and the ground in front of the cave was strewn with them.

In spite of the work done in this locality by Capt. Robinson and myself, there are still several species on the island which neither of us obtained; and it is to be hoped that, in the near future, someone will visit Margarita and make a much more complete list than we have been able to do.

RECOGNITION OF GEOGRAPHIC VARIATION IN NOMENCLATURE.[1]

BY LEVERETT MILLS LOOMIS.

IT SEEMS inborn in the human mind to desire to know the names of objects, and if the objects are new, new names are invented. When the South Atlantic States were settled back in 1600, the English colonists named our Robin after its English namesake — in their eyes, longing for the familiar things of England, the Robin of the New World was the Robin of their old home. But in the Mockingbird they found no European counterpart; they could give it no onamatopoetic name, for it had the notes of all birds, so they called it the Mocking Bird. A quaint old writer, who has hidden his identity under the initials 'T. A.,' and whose tract is one of the rarest in the long list of Americana, in writing of the birds of Carolina, says: "Birds the Country yields of differing kinds and Colours.... For Pleasure, the.... blew bird, which wantonly imitates the various Notes and sounds of such Birds and Beasts which it hears, wherefore, by way of Allusion, it 's call'd the Mocking Bird; for which pleasing Property it 's there esteem'd a Rarity."

Later came Mark Catesby, the ornithologist, and proceeded to give a new name, for the trick that ornithologists have of giving new names to familiar birds, is an old trick, as old as the trade of ornithology. This new name for the Mockingbird, which appeared in Catesby's sumptuous folio, 'The Natural History of Carolina, Florida, and the Bahama Islands,' was *Turdus minor cinereo-albus non maculatus.*

Turdus minor cinereo-albus non maculatus, however, was not to be lasting; a master mind came into the world, an iconoclast. This image-breaker was Linnæus, who had genius for system — his 'Systema Naturæ' reduced ornithology to system. The Mockingbird, still the sweet singer of the Southland, is given a new

[1] Read at the special session of the American Ornithologists' Union and Tenth Anniversary of the Cooper Ornithological Club, San Francisco, May 15, 1903.

name, *Turdus polyglottos; Turdus* the name of the genus and *polyglottos* the name of the species.

Along the way cut out by Linnæus numerous bird students traveled. Boie in 1826 took the Mockingbird out of the genus *Turdus* and put it in a genus of his own, giving the genus the name *Mimus*, the species name remaining as *polyglottus*; the whole name of the Mockingbird thus rehabilitated was *Mimus polyglottus*. In 1827, Swainson likewise instituted a new genus for the Mockingbird, styling it *Orpheus*.

Vigors, in 1839, in working up the birds obtained by the ship 'Blossom' in her voyage along the Pacific Coast gave the Mockingbird the specific name *leucopterus*, coupling it with the generic name *Orpheus*, for he supposed he had discovered a new species of Mockingbird.

In 1858, Professor Baird thought possibly he had found a long-tailed Mockingbird in California, and tentatively named it *Mimus caudatus*. In 1865, Dr. Coues called the Mockingbird of Arizona *Mimus polyglottus*, var. *caudatus*.

The last author, Dr. Mearns, to deal with the Mockingbird, tells us in 'The Auk' for January, 1902, that there are two kinds of Mockingbirds in the United States; namely, *Mimus polyglottos polyglottos*, *Mimus polyglottos leucopterus*. I fear it will be said that ornithologists have advanced backward from the binomial *Mimus polyglottus* of Boie toward the *Turdus minor cinereo-albus non maculatus* of Catesby.

With partial knowledge of geographic variation, came departure from the binomial system. *Mimus caudatus* of Baird was found to intergrade with the eastern bird and was reduced to *Mimus polyglottus*, var. *caudatus*. Later the leading American ornithologists agreed to leave out the abbreviation var., and have the pure trinomial, as in *Mimus polyglottos leucopterus*. With this change, the term subspecies came into vogue, supplanting the word variety. Then followed a period when great series were accumulated, and subspecies multiplied, and now a large part of the United States birds bear trinomials — even Catesby is outdone, for he called the Cardinal by the binomial, *Coccothraustes ruber*, while in the last systematic work on American birds the Cardinal has this cognomen, *Cardinalis cardinalis cardinalis* — in short, *cardinalis* three times, and out.

The study of specimens has made known geographic variation, as such study has made known individual variation and variation in sex, age, and season. Systematic ornithologists have groped their way into the light; of the sixteen variants, bearing trinomials, among California 'swimming birds,' fifteen were first described as species.

The Song Sparrow from Petaluma, California, originally designated *Ammodromus samuelis*, has become a sort of classic illustration of the way the facts of geographic variation have dawned upon the minds of systematic ornithologists.

Variation in sex and season in like manner has added to the darkness; for example, the male and female of Williamson's Sapsucker have been placed in different genera, and the winter and summer plumages of the Marbled Murrelet have each been described as distinct species.

Nomenclature has been a means in gaining knowledge of variation. In seasonal and sexual variation it has proved a temporary structure. Is this not also true in geographic variation? Is not nomenclature (binomial or trinomial) in geographic variation a scaffolding to be torn down rather than the edifice that is to abide?

Granting all that is unfolded in the most elastic theories of evolution concerning incipient species — it matters not whether they hail from islands where geographic variation breaks down in individual variation, or whether they be the artificially selected sections from regions where the arid passes into the humid — we are still confronted with the question: Is the science of ornithology to be advanced or retarded by continuing the recognition of geographic variation in nomenclature?

A glance at later American works on ornithology, containing life-histories as well as the systematic aspects of the subject, reveals that variants are often treated in the same manner as full-fledged species; both are given a vernacular name, description, habitat, and biography. For example, the variant of the Murre occurring on the Pacific is placed on the same footing, in this respect, as the Tufted Puffin, notwithstanding the hiatus that separates the Tufted Puffin from all other birds; the Tufted Puffin represents complete isolation of a form, the variant of the Murre variation within the bounds of such an isolated form. Whatever

future possibilities there may be in evolution, the Tufted Puffin and the variant of the Murre are not now of the same rank. We are to work out the questions of bird life of to-day, not those of ten thousand years hence. In spite of our boasted advance, we treat variants under trinomials in the same manner Professor Baird treated them in 1858 under binomials, fulfilling the adage that "extremes always meet."

If we deal with the food of birds, we find it convenient to ignore variants; the intermediates might be the only individuals with full stomachs. Thus it happens, that Dr. Judd has lumped all the Loggerheads in dealing with the food of our Shrikes.[1] Turn in what direction we will in the study of birds upon the basis of subspecies, intermediates bar the way.

Systematic ornithologists have been forced to seek stability in nomenclature in the law of priority. From subspecies, however, there is no refuge, except the opinion of experts, which varies with the type of mind of the individual expert.[2]

Mr. Ridgway in the preface to the first part of his 'Birds of North and Middle America' says: "No doubt many of the forms which the author has recognized as subspecies in the present work may appear trivial to others, especially those who have not had advantage of the material upon which they are based; but in all cases it has been the author's desire to express exactly the facts as they appear to him in the light of the evidence examined, without any regard whatever to preconceived ideas, either of his own or of others, and without consideration of the inconvenience which may result to those who are inclined to resent innovations, forgetful of the fact that knowledge cannot be complete until all is known."

Dr. Allen in a review of this work remarks:[3] "Yet it is sometimes possible for slight differences to become magnified and their importance over-estimated by long and intense consideration of them — in other words, there is danger of losing one's poise of

[1] Bull. No. 9, U. S. Dept. Agric., Div. Biol. Surv., p. 20.

[2] The case is aggravated when the attempt is made to create species from extremes of geographic variation.

[3] The Auk, Vol. XIX, p. 102.

judgment in dwelling upon minute details, which tend thereby to assume exaggerated importance."

Dr. Gill reviews the subspecies question as follows:[1] "There is a serious taxonomic problem that will confront us in the treatment of North American birds. Our ornithologists very generally have manifested a disposition to study the variations of species and to discriminate the variants as subspecies. There is a tendency in the same direction in other branches of zoology and by some it has been called the statistical method. It has been very recently employed in ichthyology. For example, Mr. Walter Garstang, of Plymouth, appears to have shown that there is an average of minor characteristics which differentiate the mackerels of different ranges as distinct races, but he has not deemed it necessary to name such races. Such studies are valuable and should not be decried. Nevertheless an instability is introduced in any group in which undue prominence is given to such variations which is embarrassing. I do not see any end to such splitting, but an interminable number of subspecies looms threatening in the future. I would suggest that in the new ornithology a very subordinate rank should be given to the subspecies. The species might be described in generalized terms, that is, including all the variants, and the diversification into subspecies indicated in terse phraseology immediately after the diagnosis of the common characters."

Better still, if we treat geographic variation not as subspecies, but as we treat variation in sex, age, season, etc. By pursuing this course we have a stable criterion. It may be rather trying at the outset, arousing in us feelings akin to superstition, to call all Song Sparrows *Melospiza cinerea*; nevertheless the geographic variations ignored[2] are not greater than the sexual variation in Williamson's Sapsucker and the seasonal variation in the Marbled Murrelet, once of sufficient import for generic and specific distinction.

The question is not whether we affirm or deny the existence of

---

[1] The Osprey, Vol. III, p. 92.

[2] The variation in size in the Song Sparrow is insignificant compared with the variation in size exhibited in the Canada Goose.

subspecies; the question is whether a bird name should be an attempt to express the facts and theories of evolution, or whether a bird name should be a convenient handle to forms exhibiting no intergradation, the species of to-day. In trying to manufacture a nomenclature for birds of remote ages, past and future, are we not putting an impediment in the way of the study of existing birds?

What then shall we call the Mocking Bird of the writer of the old tract on Carolina, the *Turdus minor cinereo-albus non maculatus* of Catesby, the *Turdus polyglottos* of Linnæus, the *Mimus polyglottus* of Boie; the *Mimus polyglottus*, var. *caudatus* of Coues, the *Mimus polyglottos polyglottos*, *Mimus polyglottos leucopterus* of Mearns? Call them all *Mimus polyglottos*, giving in the general description of the species geographic variation along with the other variations.[1]

THE CALIFORNIA MEETING OF THE AMERICAN ORNITHOLOGISTS' UNION.

BY J. A. ALLEN.

In the April number of 'The Auk' (XX, pp. 245, 246) reference was made to a proposed special meeting of the A. O. U. to be held in California some time in May of the present year. Details were given of the itinerary for the outward trip and of the probable cost of transportation for the round trip. The proposition met with such cordial approval that two Pullman cars were required for the accommodation of the members and their friends who desired to avail themselves of so favorable an opportunity to visit the Pacific coast. Chicago was the point of rendezvous for the depar-

[1] Since the above was written, I have read Dr. Allen's observations on 'Species, Varieties, and Geographical Races' in the 'Mammals and Winter Birds of East Florida' (Bull. Mus. Comp. Zoöl., Vol. II, no. 3, April, 1871, pp. 242–249). So far have we drifted, that the republication of these observations, written more than thirty years ago, would be a timely elucidation of the present questions in ornithological nomenclature.

ture, the A. O. U. special cars being attached to a train of the Santa Fé Railway leaving that city at 10.30 P. M., May 3; and San Francisco was reached on the afternoon of May 14. The eleven days thus spent were exceedingly profitable to the travelers, the journey being broken at several points for the purpose of making side trips to places of special interest, as the old historic town of Santa Fé in New Mexico, where a day was spent; at Adamana, in eastern Arizona, in the Little Colorado Desert, a day was given to the wonderful 'Petrified Forests'; two days were allotted to a side trip from Williams, Arizona, to the Grand Cañon of the Colorado; a morning at Hesperia, Arizona, gave opportunity for an examination of the famous yucca trees in the Mohave Desert; an afternoon at Riverside, California, was a delightful experience, and a day's stop at Los Angeles was improved by many of the party to make a trip to the summit of Mount Lowe.

Very few of the members of the party had previously visited the country traversed, and everything was new and intensely interesting; and, fortunately, among the few to whom the country was not new were experts who through previous extended field work in the region were able to give information respecting its topographic features and the peculiarities of its flora and fauna.

At Chicago an informal reception was given to the A. O. U. members by Mr. and Mrs. Ruthven Deane, at whose house they thus had opportunity to meet many Chicago ornithologists and naturalists; a reception was tendered them at Los Angeles by the Southern Division of the Cooper Ornithological Club. In San Francisco they received a most cordial welcome from the members of the Cooper Ornithological Club and the California Academy of Sciences, the Museum of the Academy forming the general headquarters, and in its lecture hall was held the two days' joint session of the A. O. U. and the Cooper Club.

The purpose of holding a meeting of the A. O. U. at some point on the Pacific coast was, primarily, to bring together as many as possible of the working ornithologists of the East and the West; it was therefore especially opportune that the first special meeting of the A. O. U. and the Tenth Anniversary meeting of the Cooper Ornithological Club could be held in joint session.

The meeting was called to order at 11 A. M., May 15, Dr. C.

Hart Merriam, President of the A. O. U., in the chair, and Mr. Charles R. Keyes, Secretary of the Cooper Club, acting as secretary. Mr. Charles A. Keeler gave a brief address of welcome in behalf of the Cooper Club, and an appropriate response was made by the President of the A. O. U. An afternoon and an evening session followed, and the meeting reconvened at 10.15 A. M., May 16, adjourning, *sine die*, at 12.30 P. M., of the same day.

Thirteen eastern members of the A. O. U., and thirty-three members of the Cooper Club were in attendance at the various meetings, and about twenty visitors.

The following papers were read:

1. Origin and Distribution of the Chestnut-backed Chickadees. Joseph Grinnell.

*2. The Cassin Auklet. Howard Robertson.

3. Recognition of Geographic Variation in Nomenclature. Leverett Mills Loomis.

*4. Notes on the Fresno District. J. M. Miller.

*5. Do Valley Quail use Sentinels? Jno. J. Williams.

6. An Island Community, or Bird-Life on Laysan; illustrated with lantern slides. Walter K. Fisher.

7. Notes on the Birds of Chili. Joseph Mailliard.

8. Call Notes of the Bush-tit. Joseph Grinnell.

9. General Habits of the Prairie Falcon. Donald A. Cohen.

10. Oregon Birds caught with a Camera; illustrated with lantern slides. Wm. L. Finley.

11. The Bird Islands of Our Atlantic Coast; illustrated with lantern slides. Frank M. Chapman.

12. Remarks on the A. O. U. Journey across the Continent. Louis A. Fuertes.

13. The Farallon Islands; illustrated with lantern slides. W. Otto Emerson.

Resolutions of thanks were adopted on the part of the A. O. U. members for the courtesies extended to them by the members of the Cooper Club and the Academy of Sciences, and to the A. O. U. Committee of Arrangements for the California trip.

The eastern A. O. U. members present were C. Hart Merriam, President A. O. U.; J. A. Allen, Louis B. Bishop, H. C. Bumpus, Frank M. Chapman, John Lewis Childs, Mrs. E. B. Davenport, J. Dwight, Jr., J. H. Fleming, L. A. Fuertes, W. W. Maires, T. S. Palmer, Otto Widmann.

---

* Read by title at the close of the session.

In the afternoon following adjournment a trip was made to the Leland Stanford University at Palo Alto, in response to an invitation from its President, Dr. Jordan. The following day Mount Tamalpais was ascended by rail, the descent being made by the Ross Cañon trail, for the purpose of seeing its fine redwoods, and getting into close touch with some of the forms of vegetation and bird life characteristic of this portion of California.

On arrival in San Francisco the A. O. U. party practically disbanded, as it was planned to do from the first, the various members independently making their plans for the return journey and for such side trips as their several interests dictated. The Yosemite Valley and Monterey were points subsequently visited by many of the members, while the Farallons, and various points on the coast, in the San Joaquin and Sacramento valleys, and in the high Sierras attracted others, some six weeks or more being available for field work or sightseeing before the expiration of the time allotted for the trip. Messrs. Chapman, Dwight, Bishop, and Fuertes planned somewhat extended collecting trips, and were greatly aided in their plans for work by the kindness of various numbers of the Cooper Club.

The trip is one to be long remembered by those who were so fortunate as to be numbered among the congenial party of forty-four persons who left Chicago on the evening of May 3, on the A. O. U. excursion to California. The lay members, so to speak, will return with greatly enlarged views of the country and its resources and scenic wonders; the strictly ornithological contingent will have acquired a clearer conception of the varied physical conditions of the vast region between the Mississippi River and the Pacific coast, and of its diversified faunal and floral areas, and the wonderfully varied climatic conditions included within the boundaries of the State of California; and last but let us hope not least in value are the acquaintances the eastern members were enabled to form with the leading workers in Pacific coast ornithology, whom for the most part they had previously known only through correspondence or their published writings. The Cooper Club has most thoroughly redeemed its promise (see editorial in 'The Condor' for July, 1902) to give "a cordial welcome and a generous reception" to the A. O. U. in the event of its being able to arrange a meeting in California.

GENERAL NOTES.

Great Black-backed Gull in Oneida County, N. Y. — An immature female Great Black-backed Gull (*Larus marinus*) was shot in the southern part of this town, the latter part of February, 1903. This is the first recorded occurrence of the species in this county. — W. S. JOHNSON, *Boonville, Oneida County, N. Y.*

Additional Records of the European Widgeon (*Mareca penelope*) in Indiana. — My last record of this duck for Indiana was noted in 'The Auk,' Vol. XVI, 1899, p. 270.

An adult male was killed March 27, 1903, on the Englis Lake marshes by Mr. James M. McKay and the mounted bird is now in his possession. While he came to the decoy alone, there were several flocks of his American cousins on the marsh at the time, in whose company he had undoubtedly been.

Mr. Harry Ehlers of Chicago, has in his collection of mounted ducks, an adult male which he shot April 7, 1898, and a female shot March 28, 1898. This pair was taken on the Kankakee marshes near Thayer, Indiana. Another male was killed by Mr. Peter Willem of Chicago, near the same locality on March 31, 1902, and the mounted specimen is in his possession.

As a specimen was captured on Licking Reservoir, Ohio, in 1902,[1] and three others on the Monroe marshes, Michigan, in 1900 and 1902.[2] These records bring the number to seventeen for the interior and nine for the State of Indiana. It is not a little strange that all these Indiana birds should have been taken along the Kankakee River during a period of twenty-two years. — RUTHVEN DEANE, *Chicago, Ill.*

Hybrid Duck — Mallard (*Anas boschas*) + Pintail (*Dafila acuta*). — Eight or ten years ago there was killed in this vicinity by Mr. George Lower (since deceased) a hybrid duck — *Anas boschas* (Mallard) + *Dafila acuta* (Pintail) — which specimen has just been placed in the Colorado Museum of Natural History in this city. I have recently had an opportunity of making a detailed study of this specimen and have carefully compared it with typical *A. boschas* and *D. acuta*, the results of which comparison I here give.

Bill plumbeous with black stripe on culmen as in ♂ *D. acuta*, but in measurements showing tendency toward *A. boschas*, being .75 broad at base and having culmen of 2.25; forehead and crown grayish brown streaked with black as in *D. acuta*, this well defined stripe merging into plain light cinnamon upon and terminating in a blunt point at the pos-

[1] The Wilson Bulletin, New Series, Vol. IX, p. 71.
[2] The Auk, Vol. XIX, p. 284.

terior extremity of the occiput; rest of head showing blending of brown of *D. acuta* with brilliant metallic green of ♂ *A. boschas* with strong tendencies toward the latter, the postocular region, extending from the eye backward across the head and from the stripe on the upper head diagonally downward to a point opposite the base of the lower mandible, bronze-green, which in the remaining portions of the head and neck shades into more definite bronze; open collar of lower neck .50 wide in front, widening to .75 on sides, and in rear extending upward into points, and here being 1.50 wide, thus showing a clear and very interesting combination of the regular narrow open collar of ♂ *A. boschas* and the long white stripes of the hind neck of ♂ *D. acuta*; upper chest, covering an area 4 in. across from neck collar, light cinnamon showing a blending of the dark chestnut of ♂ *A. boschas* with the white of ♂ *D. acuta*; lower chest, breast and abdomen grayish white (not as dark as in ♂ *A. boschas* nor as light as in ♂ *D. acuta*), lower chest covering an area 2 in. wide without zigzag markings but mottled with half concealed circular brownish spots (the terminal portions of shaft markings as in ♀ *D. acuta*); remaining lower parts with faint zigzag dusky markings as in ♂ *A. boschas*; sides and flanks as in ♂ *A. boschas*; back and rump very much as in ♀ *D. acuta* but markings narrower and white much less prominent; tail 5.75, the four middle feathers (which are not as pointed as in ♂ *D. acuta*) forming the 'pin,' one feather of each of the middle and second pairs overlapping the other along the midrib, the middle pair dishing up at an angle of 45° and the second pair at an angle of 20°, thus showing a tendency to curl as in ♂ *A. boschas*; two middle tail feathers iridescent green, two second feathers bronze-green narrowly edged with white, remaining tail feathers with gray centres and white edgings as in ♂ *D. acuta* but edgings broader; upper and under tail-coverts as in ♂ *D. acuta*; scapulars brownish gray, darker than in ♂ *D. acuta* and lighter than in ♂ *A. boschas*, with zigzag markings finer than in ♂ *D. acuta* and a trifle coarser than in ♂ *A. boschas*, with jet-black scapular patch corresponding to that of ♂ *D. acuta* but of less extent, being only 2.50 in. long by .50 in. broad; speculum brilliant metallic green like that of head of ♂ *A. boschas* in marked contrast with the metallic violet speculum of ♂ *A. boschas* and the purplish bronze speculum of ♂ *D. acuta*, also differing from both these species in its anterior bordering, which in this hybrid is bicolored — grayish brown posteriorly and grayish white anteriorly; remaining wing markings as in ♂ *A. boschas*; legs and feet same size and color as in *A. boschas*.— A. H. FELGER, *Denver, Col.*

The King Rail in Plymouth County, Massachusetts.— On January 20, 1903, an adult female, *Rallus elegans* was short by Mr. Clarence Chandler at Ellisville, Plymouth County, Mass. The bird was at once sent to me and proved to be quite fat and in fine plumage. When shot the rail was skulking among some low bushes and dry grass near a salt marsh.— ARTHUR LINCOLN REAGH, M. D., *West Roxbury, Mass.*

Early Record for the Piping Plover (*Ægialitis meloda*) in Rhode Island.— I have just obtained a Piping Plover which was taken on March 24 last by Mr. C. B. Clarke, a local taxidermist. The bird, which is a male in spring plumage, was shot on the Middletown marshes about three miles east of Newport. I believe this is the earliest spring record for the State.— LEROY KING, *Newport, R. I.*

Richardson's Owl (*Nyctala tengmalmi richardsoni*) in Illinois.— The only previous capture of this owl in the State was recorded in the 'Ornithologist and Oölogist,'[1] one having been taken October 15, 1884, at Rockford. I am indebted to Mr. Robert H. Van Schaack for the following information: "The Richardson's Owl was shot by my son, Louis F. Van Schaack, December 26, 1902, in Kenilworth, Ill. He found the bird along a small ditch that drains from the Skokie Swamp; he shot the owl with a toy air gun." I examined the specimen while in the possession of the taxidermist who mounted it, who informed me that he had mounted another specimen of this species about the same time, which was said to have been shot not far from Chicago, but I have been unable to get any definite locality or date.— RUTHVEN DEANE, *Chicago, Ill.*

Nesting of the Red-bellied Woodpecker in Harford County, Maryland. — Until within the last few years, I have found the Red-bellied Woodpecker (*Melanerpes carolinus*) to be quite a rare bird within a radius of twenty miles of Baltimore, and, until very lately, most of my records were made during the winter months.

For the past twenty years it has been common in the vicinity of Princess Anne, Somerset County, Maryland, but all my dates were made in the months of November, December, and January, the only time I was there. Still, from all I can find out, I am sure it is a resident there the year round, and my friends on the farm tell me they find it very destructive to the cherries.

On April 21, 1891, I made what I called my first spring note on the species, a bird being seen in a piece of heavy timber at Grace's Quarter Ducking Shore on the Gunpowder River, Baltimore County. This made me think perhaps they might nest here, but I saw no more birds within the breeding season until April, 1899, although, on July 28, 1898, in this same piece of woods Mr. F. C. Kirkwood and I saw an immature bird busily dodging the fierce attacks of a Red-headed Woodpecker.

Again, August 13, 1899, about one half mile from where the former young bird was seen, I saw two young, so small that the down was still clinging to their heads. These were apparently hunting for grubs and when one would fly it was immediately followed by the other, they seldom keeping more than ten feet apart.

Finally, after a little over twelve years' search for the nest I was

[1] Ornithologist and Oölogist, Vol. X, March, 1885.

rewarded by finding it May 11, 1902. The nest was in a dead stub growing up from the side of a red oak, and was twenty-four feet from the ground. The opening measured 2 × 2¼ inches and it was 5 inches from the outer edge of the hole to the back wall. It went straight down for 11½ inches, and the four eggs were resting on some fine chips.

About twelve inches below the entrance to the nest was a smaller hole. This had been commenced by the birds, but was abandoned, as they had run into a hard knot after digging in about 1¼ inches. The eggs were deposited just back of the lower hole, and there was only about one fourth of an inch of wood between them and the abandoned opening. The eggs, which are now in the collection of Mr. F. C. Kirkwood, were about ready to hatch.

The Red-bellied Woodpecker can now be called a resident species for Maryland, as I have data for every month in the year.

The only authentic record I have of their breeding in the State other than mine is a note of Mr. L. D. Willis, who saw old birds feeding young near Church Creek, Dorchester County, May 5, 1897. He says the nest was about 60 feet up, in the dead top of a red oak.— WILLIAM H. FISHER, *Baltimore, Md.*

A Much Mated House Sparrow.— In the spring of 1895 I placed a small box with a movable top in a tree near a window of my room in order to try a few experiments with the prolific English Sparrow (*Passer domesticus*) and made the following observations in 1897. During the coldest days and nights of the winter the box was not inhabited, but during warm spells it was occupied by three sparrows, a male and two females. On February 26 I first saw them carry straw to the box to repair the old nest. The male had driven away one of the females and had considerable trouble to keep her away.

I have noticed that where House Sparrows live in a box they take much time in constructing their nest, which is often not completed until some time after the eggs are laid, while those that build in trees build the whole nest in a day or two.

On March 15 the birds were still building. On March 19 I saw them copulate; also on March 23, and again on March 25. Then I shot the female while the male was only two feet away from her; he not hearing any noise, could not make out what ailed her, but it did not take him long to collect his thoughts, for he darted down and was on the ground before the female touched it. As she struck the ground she bounded in the air about a foot, which frightened him. He approached to within a foot of her and fluttered around her. She never even moved her wings after I shot her. My dog picked up the dead bird but I made him drop it by calling to him, but the male did not go back to her. Ten minutes after the male was courting another female; he seemed to know his mate was dead and wanted another immediately. On dissecting the dead bird I found the ovaries all small and the bird was apparently an old one.

On the morning of March 26 I heard the birds in the tree, and on looking out saw the male enter the box and three females were flying around the outside. He stood in the doorway and acted as if he was afraid they wanted to enter, and when one flew near the door he would rush in, turn around and chatter, as these birds do when fighting. Soon one of the females left, when the male came out and courted one of the other two. The other protested but soon flew away. On March 27 I saw them copulating, and also on March 28, and again on April 2 and 3. Then I shot the female when the male was not around. This was at noon. All the afternoon he did nothing but chirp. On dissecting the female I found the ovaries were well developed, she being nearly ready to lay; the bird was apparently a young of the previous year.

On April 4 he had another mate, but she seemed afraid to go into the box. She would enter half way and then back out. The next day she went into the box. April 10 and 11 I saw them copulate, and again on April 17, when I shot the female, at the entrance to the box while the male was on the top looking over at her. The male was very much frightened and flew away. On dissecting the female I found the ovaries very small. On April 22, the male was chirping near the box, coaxing the females to come near and then driving them away. April 23 he was courting a female near the box. On the morning of April 24 he had five females near the box. The supply of female sparrows seemed to be much greater than the demand. April 29 he was again mated. May 6 I saw them copulating. May 19 I shot this female and a cat got it. I now had to leave home for a few days, but on May 27 I found he not only had a new mate but I took from the nest five eggs, four slightly incubated and one addled. I did not shoot this bird, and on May 30 and 31 I saw them copulate. I have no further notes, as I was away the rest of the summer.

This bird had five mates up to the first of June, and he did not seem to mind, only for a few minutes, the loss of any of them, and always got a new mate sooner when he saw his mate killed (in one case in ten minutes) than when she was killed when he was away.

Apparently there must be many birds that go unmated throughout the year, for late in April this male had five females after him, all at one time. It would be interesting if some one who has the opportunity would experiment by shooting the male and see if the female would get another mate, and also carry the observation to a later period in the year. We often see several male birds fighting in the street for one female, but in this case the male had more females than he wanted.—J. H. CLARK, *Paterson, N. J.*

The Louisiana Water-Thrush in Minnesota.—On May 23, 1903, my father and I, while collecting small birds on the right bank of the Mississippi River near the mouth of Minnehaha Creek, shot an adult male Louisiana Water-Thrush (*Seiurus motacilla*). Though the female was not seen she was probably nesting near by as the male was in full song. Although Ridgway gives it (Birds of North and Middle America, Part II,

p. 640), as breeding in the "Mississippi bottoms as far as Red Wing," about fifty miles below Minnehaha Creek, we had not hitherto found this species in the vicinity of Fort Snelling. — LOUIS DI ZEREGA MEARNS, *Fort Snelling, Minn.*

Lophophanes vs. Bæolophus. — If the Crested Tits are to be separated generically from *Parus*, as the writer thinks should be done, the name *Lophophanes* should be restricted to the Palæarctic species, and the name *Bæolophus* Cabanis, used for the American species. The two groups differ materially in structural detail, and each runs through the same scale of variation as to style of coloration, both genera containing conspicuously "bridled" species (*Lophophanes cristatus* and *Bæolophus wollweberi*) and excessively plain-colored species (*Lophophanes dichrous* and *Bæolophus inornatus*). This parallelism in color-variation has served to confuse the case by leading those authors who would separate the two groups to place *B. wollweberi* in the genus *Lophophanes* on account of its general resemblance in coloration to *L. cristatus*; but *B. wollweberi* represents the extreme differentiation of the American group in structural characters.

The species and subspecies of *Bæolophus* recognized by the A. O. U. Committee on Classification and Nomenclature are as follows: —

731. *Bæolophus bicolor* (Linn.).
731*a*. *Bæolophus bicolor texensis* (Sennett).
732. *Bæolophus atricristatus* (Cassin).
733. *Bæolophus inornatus* (Gambel).
733*a*. *Bæolophus inornatus griseus* (Ridgway).[1]
733*b*. *Bæolophus inornatus cineraceus* (Ridgway).
734. *Bæolophus wollweberi* (Bonap). —

ROBERT RIDGWAY, *U. S. National Museum, Washington, D. C.*

Balancing with One Wing. — Soon after reading Mr. Fishers' article in 'The Auk' for April on one wing equilibrium, I had an opportunity to observe this same method of balancing in the common Blue Jay. I secured a young Blue Jay, who had been out of the nest only twelve hours. When he perched on my finger, I turned the finger over, so as to destroy his equilibrium. But he would not be thrown off, but once shot out his left wing and gained his balance. I tried this experiment several times, with the result that he always gained his balance with one wing, usually the left one, as in Mr. Fisher's House Finches. He used his

[1] The removal of this form from the genus *Parus* renders the suppression of the subspecific name *griseus* and the substitution of *ridgwayi*, as proposed by Dr. Richmond, unnecessary.

right wing independently of the left, however, two or three times; but the left wing was used much more. This must be an inherited instinct, for the bird had not been with its parents since leaving the nest, for more than a few minutes, having been immediately placed in captivity, and the experiment tried twelve hours later.—ERNEST SEEMAN, *Durham, N. C.*

Ohio Notes.— I count myself fortunate in having found a pair of Rose-breasted Grosbeaks in this vicinity. They rarely nest here, usually remaining with us a few days, then going farther north, but this pair evidently intends to remain. I first saw them the 18th of May flying about a thicket of young trees and bushes as if their nests were near. Since that date I have seen the pair a number of times but have not yet found the nest. I am satisfied, however, that it is in the thicket and I will probably find it when the young are hatched.

The Red-headed Woodpeckers have apparently deserted this vicinity permanently; I have seen but two birds this spring. The numerous traction lines being constructed, and the consequent building up of the country districts, is, I think, the chief cause of their disappearance. On a recent trip through the more eastern counties I found the Redheads to be numerous.

The various ornithological and nature societies of Cincinnati and Hamilton County are again considering methods of dealing with the English Sparrows. In Cincinnati they are particularly troublesome, but in the past all efforts to control them have failed.

In southwestern Ohio the Cuvier Club of Cincinnati has compelled a rigid enforcement of the laws protecting our birds and has accomplished much good. Many of the desirable species are much more common than formerly. Cardinals, Orioles, Goldfinches, Thrashers, and other species are numerous. Chats, Flickers, Tanagers, Catbirds, etc., while not so numerous as the first mentioned species, are quite common.— NAT. S. GREEN, *Camp Dennison, Ohio.*

Louisiana Migration Notes.— During the past spring at New Orleans, and at other localities having the same latitude, additional data have been collected that show the extreme procrastination of many of the Warblers during the spring migration. In the wake of strong migratory impulses the last part of April, several species have loitered in this section until May was nearly half gone. The last Tennessee Warbler was noted May 9, at Audubon Park, New Orleans. April 29, and the week succeeding, this species had been reasonably common in the willow and hackberry thicket that grows on the river front at Audubon Park. In company with the Tennessee Warbler on April 26 and for one or two of the succeeding days, were one or two each of the Redstart, Black-throated Green Warbler, Magnolia Warbler, and Bay-breasted Warbler. In the matter of song, however, the Tennessee Warbler was alone. Mr. W. B. Allison reports

that in the oak and pine woods at Bay St. Louis, Miss., on the Gulf Coast, the preceding species, excepting the Tennessee Warbler, were still present as late as May 10.

The character of weather that induces this delay sometimes persists in the latitude of New Orleans past the middle of May, so it is doubtful how late the migrants of the class referred to would be apt to linger. The extreme record so far established is May 15 for the Redstart and Bay-breasted Warbler. One of each species was seen on that date in 1902 at New Iberia, La., 125 miles west of New Orleans, on the edge of the fertile prairies of southwest Louisiana, in which region migration is noticeably later than at New Orleans. The lateness of this date is less surprising for the Redstart than for the Bay-breasted Warbler, as the Redstart has been found breeding in central and northern Louisiana. Audubon, however, records that he became acquainted with the Bay-breasted Warbler in a cotton field in June. I have never seen any explanation of this anomaly.— H. H. KOPMAN, *New Orleans, La.*

RECENT LITERATURE.

Mudge on the Tongue Muscles of Parrots.[1]—This paper contains a detailed and careful study of the muscles of the tongues of various species of Parrots and presents a scheme of classification based upon them and on the bones of the hyoid. Reference is made to the observations of others on the tongues of birds, but it might have been said that many of them, and especially the papers by Lucas, dealt with external modifications only. Nothing is said of these in the present memoir, so that we do not know whether or not Prof. Mudge attaches any value to outside characters, although we infer that he does not since *Trichoglossus* is not merely accorded no special rank, but is not even mentioned in the table of classification. The author states that his investigations show that the lingual muscles of the parrots are in the course of evolutionary changes, some of the muscles exhibiting the structural variations indicative of these much more markedly than others, and that the Loriidæ have advanced farthest along the road of specialization. He then pro-

[1] On the Myology of the Tongue of Parrots, with a Classification of the Order, based upon the Structure of the Tongue. By Geo. P. Mudge, A. B. C. S. Lond., F. Z. S. etc. Trans. Zool. Soc. London, Vol. XVI, Oct 1902, pp. 211–272, pll. xxvi–xxix.

ceeds to trace the various stages of evolution in the order of their probable occurrence, illustrating the conditions found in a large number of species by admirable figures. And it may be said that only one who has done similar work can fully appreciate the time and labor that this study must have entailed. At the end we are presented with a table giving a systematic arrangement of the divisions of the parrots defined by the characters offered by the lingual muscles and hyoid. By these the parrots are divided into three families, Loriidæ, Nestoridæ and Psittacidæ; and here the work of Mr. Mudge may be looked upon as confirming the views of those who have established the first two families on other characters. The Psittacidæ are subdivided into two 'Groups,' one of which contains only the Psittaculinæ and Pyrrhulinæ while the second consists of seven subfamilies comprising the vast majority of parrots. To a certain extent the geographical boundaries of the subfamilies agree with the anatomical limits, but we find *Caica* bracketed with *Pyrrhulopsis*, and *Platycercus* with *Bolborhynchus*, and the geographic unity is by no means conspicuous, as it is in the divisions of Gray's 'Hand List.'

It may, perhaps, be a mere personal prejudice, but the Australian region is so well marked ornithologically that it seems a little suspicious to see Australian and South American parrots placed in the same subfamily. Still every ornithologist is aware that no two schemes for the subdivision of the parrots agree in their minor details and that of Dr. Mudge is consistent in using the same class of characters throughout.

It would have been interesting to have compared the present arrangement with the results of Prof. Thompson's study of the cranial characters of parrots but, unfortunately, Thompson failed to put his results into definite shape and we are in the dark as to just what his ideas may be.

Some might perhaps urge against Prof. Mudge's classification that *Stringops* is not awarded a sufficiently high rank, being placed with other Australian species in the Cacatuinæ, but if *Stringops*, though specialized in some points is, on the whole, merely a cockatoo of generalized structure this association is what might have been expected on theoretical grounds.

Finally, it may be suggested, without in the least wishing to depreciate the most excellent work of Prof. Mudge, that it remains to be seen if an examination of the lingual muscles of any other division of birds will yield as good results as has been afforded in the present instance. The parrots, in structure and habits, are a remarkably homogeneous group of birds and it would seem that the differential evolution of their tongue muscles might be more uniform than in any other group, and consequently more available for purposes of classification.— F. A. L.

Winkenwerder on the Migration of Birds.— In the present paper[1] of

[1] The Migration of Birds, with Special Reference to Nocturnal Flight. By H. A. Winkenwerder. Bull. Wisconsin Nat. Hist. Soc., Vol. II, No. 4, Oct., 1902, pp. 177–263, with diagrams and other illustrations.

nearly one hundred pages the author makes an important contribution to the literature of the subject, through, especially, his record of observations on the nocturnal movements of birds as observed by himself and others through telescopes. This detailed record, with the accompanying diagrams, forms an 'Appendix' of some 50 pages. The main discussion is divided into four chapters: (1) Historical Review; (2) The Causes of Migration; (3) Migratory Routes; (4) The Manner of Migration. The first two chapters seem rather perfunctory and unsatisfactory; the second, on the causes of migration, closes with the following statement of the author's conclusions: "Birds are set in migratory motions by a complex combination of changes in temperature, humidity and living nature. The cause for migration, however, is the failure of food in two widespread areas — the north and the south — at opposite seasons of the year" (p. 196). He also says (p. 191): "It has been maintained for years that the question of food will never explain the vernal migrations, however well it serves that purpose in autumn. . . . The assumption that the question of food will not explain the vernal migration has probably been due to our ignorance of the physical conditions of the south." He then cites a remark of Weismann's to the effect that "ponds, rivers and creeks become dry, insects disappear and even vegetation fails in many regions of the south in summer," and quotes "Mr. C. R. Ricker" (*lege*, C. B. Riker[1]) on the effect of the dry season on vegetation, etc., at Santarem, Brazil (Mr. Winkenwerder, however, does not state the locality of Mr. Riker's observations), and adds: "Do not cases of this kind give us rather striking evidence that the food supply of the south is limited?" To Mr. Winkenwerder the matter is very simple. He says: "We have thus two areas in the geographical distribution of birds that are deficient in food at opposite seasons of the year, and we can see readily enough the cause for migration, both in the spring and in the fall"!

Under 'Migratory Routes' the author describes the methods and discusses the evidence afforded by the extensive series of observations on the nocturnal movements of birds as seen through telescopes at Madison and Beloit, Wisc., Lake Forest, Ill., and Detroit, Mich., during May, 1900, and also in April, May, September and October, 1898–1901, at Madison. The theory of migratory routes is considered as established, and also the theory that they are determined by the topographic features of the areas traversed.

Under the head of 'The Manner of Migration' are considered 'Numbers associated in Migration,' 'The Altitude attained in Migration,' and the 'Associations of Individuals and Species.' Nine thousand birds per

---

[1] Mr. Riker's name is constantly misspelled "Ricker" throughout the paper, Coues appears as "Cowes", other names of authors are also misspelled, and Mr. Brewster's paper on bird migration is cited repeatedly as "Bull. Nutt. Orn. Club, No. 1," though sometimes correctly as Mem. Nutt. Orn. Club, No. 1.

hour, it has been calculated, were seen by Dr. G. O. Libby, in 1897, passing across the field of the telescope at the Washburn Observatory, during the whole period of observation. Telescopic observations seem to show that "by far the greater number do not attain an altitude much over one half mile from the earth's surface," and that former estimates of the altitudes at which birds migrate have been "far too high." As other observers have shown, many species are found in close association in migration, and also that the individuals may move singly, or in straggling bands, or in compact flocks.

As already intimated, the chief value of the present paper consists in the record of a considerable mass of new telescopic observations on the nocturnal flights of migrating birds.— J. A. A.

North American Water-Fowl. —Another bird volume of the 'American Sportsman's Library' series,[1] recently issued, treats of the 'Water-Fowl Family.'[2] It forms a volume of about 600 pages, under the joint authorship of L. C. Sanford, Dr. L. B. Bishop, and T. S. Van Dyke, with numerous illustrations by Fuertes, Bull, Frost, and others, the greater part of the bird illustrations being by Fuertes. The first fourteen chapters (pp. 1–502), devoted to 'Duck-shooting,' 'Goose-shooting,' 'The Swans,' 'Rail-shooting,' and 'Shore-bird Shooting,' are by Mr. Sandford, while the three chapters (pp. 503–564) treating of 'The Water-Fowl of the Pacific Coast,' are by Mr. Van Dyke. Then follows 'Diagnoses of Families and Genera' (pp. 565–579), by Dr. Bishop, and a very full and satisfactory index. Mr. Sanford has had a wide experience in the pursuit of North American 'Wild-Fowl,' and writes from an intimate personal acquaintance with the birds whose habits he so well describes. Some sixty pages are first given to the general subject of Duck-shooting, describing the different methods prevailing at various localities and under diverse conditions, including some remarks on 'The Decrease of Wild-Fowl' (pp. 63–70); then the Ducks are taken up in systematic sequence, species by species, followed by a similar treatment of the Geese, Rails, and Shore-Birds. All of the species and subspecies enumerate as North American in the A. O. U. Check-List, the waifs and strays from other countries, are included. Under each species is first given, in small type, a very full description of the birds, including sexual and seasonal variations of the plumage, in most cases including the downy young, and the eggs

[1] For a notice of the 'Upland Game Birds' see Auk, XIX, 1902, p. 306.

[2] The Water-Fowl | Family | By | L. C. Sanford | L. B. Bishop | and T. S. Van Dyke | New York | The Macmillan Company | London: Macmillan and Co., Ltd. | 1903 | All rights reserved — Crown 8vo, pp. ix + 598, 1 photogravure and 19 half-tone plates from drawings by L. A. Fuertes, A. B. Frost and C. L. Bull. American Sportsman's Library Series, edited by Caspar Whitney.

There is also a very full statement of the geographical distribution, prepared especially for use in the present connection by Dr. Bishop, who has contributed the general matter relating to the River Ducks, Sea Ducks, Mergansers, Geese, Swans, the Rail Family, etc., and the notices of the extra-limital species, and some other matter. 'The Water-Fowl Family' is thus a book for sportsmen which may be looked upon as technically correct in all matters of scientific detail, while the biographies of the species are satisfactorily full, and the details especially of interest to the sportsman are not omitted. The attention of ornithologists is directed to this book as containing much matter of permanent value from the standpoint of the naturalist, and especially to Dr. Bishop's carefully prepared summaries of the 'habitats' of the species, which give both the breeding and winter ranges, so far as they are at present known. There is also a note by Dr. Bishop (p. 365) on the intergradation of *Tringa couesi* and *T. ptilocnemis*, and apparently the first descriptions of the downy young of several species of the Ducks and Shore-birds.— J. A. A.

The 'New' Edition of Nuttall.— Two previous editions of the 'New Nuttall' have appeared during the last twelve years, the first in 1891, reviewed at length and somewhat severely in Volume IX of 'The Auk' (pp. 59–61), and the second in 1896, noticed in 'The Auk' for January, 1897 (XIV, p. 109). The present (third) edition [1] is a reprint from the electrotype plates of the second edition, with the omission of Mr. Chamberlain's preface, and a reversion to the misleading titlepage of the first edition of the 'New Nuttall.' What we have is not 'A Popular Handbook of the Birds of the United States and Canada,' but, as properly expressed in the title of the second edition, 'A Popular Handbook of the Ornithology of Eastern North America.' Why the publishers should revert to Nuttall's original title when the little of Nuttall's original work that related to "species which occur only to the westward of the Mississippi valley" has been omitted (see preface to first edition), is a question they will doubtless be frequently called upon to answer by unsuspecting purchasers of 'A Popular Handbook of the Birds of the United States and Canada.'

The present edition is printed on thin paper, thus bringing it within convenient compass for binding as a single volume; and the price being reduced from $7.50 to $3.00 will doubtless render the work available to a

[1] A Popular Handbook | of the | Birds of the United States | and Canada | By Thomas Nuttall | New Revised and Annotated Edition | By Montague Chamberlain | With Additions, and One Hundred and Ten | Illustrations in Color | Boston | Little, Brown, and Company | 1903 — Crown 8vo, two volumes bound in one, as separately paged 'parts.' Part I, Land Birds, pp. xliv + 473; Part II, Game and Water Birds, pp. ix + 431; pll. col. i—xx, and 172 text cuts. Price, $3.00.

larger number of readers who would otherwise forego the possession of the 'New Nuttall,' which contains so much of the charming original. —J. A. A.

Scott's 'The Story of a Bird Lover.' — Mr. Scott's autobiography,[1] published under the above title, forms a book of unusual interest. It has a fascination hard to analyze, as probably few ornithologists who open its pages will lay the book aside till the narrative of Mr. Scott's varied experiences as a field naturalist and collector has been perused to the end. That the title chosen is not unwarranted is evident throughout, and his enthusiasm will awaken a responsive throb in the hearts of many readers of kindred spirit. The 'Story' consists of fourteen chapters, each dealing with either a distinct period in the author's history or with some special excursion or field experience. It is written, we are informed, mainly from the recollection of the events chronicled long after they transpired, and thus evinces the author's retentive memory; but there are evidences here and there of slight lapses, or of lack of care in proof-reading, as in the orthography of the names of some of the persons mentioned in the early part of the narrative. The style is for the most part terse, simple, and animated, and has about it a characteristic personality unmistakable to those who have ever known Mr. Scott intimately.

The story begins with an account of the author's 'childhood,' 'youth,' and 'student days,' and follows with a general recital, in chronological order, of his field experiences, beginning with a trip to West Virginia in 1872, to western Missouri in 1874, to Florida in 1876, to Colorado in 1878, and to Florida again in 1878–79; the interval from 1882–1886 was spent mainly in Arizona, and 1886-90 on the Gulf Coast of Florida; Jamaica was visited in the fall of 1890, and two trips were made later to England. The scientific results of these numerous ornithological expeditions having already been published in a long series of special papers, only a list of them, in the form of a bibliographical supplement, being here given; but with the narrative is incorporated a large amount of personal reminiscence, relating to the people met with and the general condition of the country at the various localities visited at dates now so remote that these incidental references add much to the interest of the 'Story.'

The last chapter is entitled 'The Naturalist's Vision,' and deals with his studies of live birds confined in aviaries. From small beginnings he has now "a laboratory for the study of live birds," in which "between four and five hundred individuals are now installed and under constant observation." He outlines in this chapter some of the more obvious

[1] The | Story of a Bird Lover | By | William Earl Dodge Scott | [Design] New York | The Outlook Company | 1903 — 8vo, pp. xi + 372, and frontispiece.

problems that await investigation, and which may be studied to advantage only through intimate acquaintance with individual birds; and finally expresses his conception of how such work should be conducted.

As already said, Mr. Scott has given us a very attractive narrative of his career as a naturalist; and so many matters of interest are chronicled that we trust a suitable index, rendering them more readily accessible, will be supplied in future editions of the work. — J. A. A.

Mrs. Bignell's 'My Woodland Intimates.' — The author of 'Mr. Chupes and Miss Jenny' (see Auk, XVIII, 1901, p. 288) here[1] presents us with a series of delightful sketches of out-of-door scenes and incidents, portraying the changing seasons and the attendant mutations in animal and vegetable life as observed in a "quiet, secluded, eastern New Jersey haunt and its immediate neighborhood." The varying aspects of field and woodland are noted under such titles as 'August Moods and Contrasts'; 'En Route' (September); 'Good-by to Summer' (October); 'Gray Days and Merry Ways' (November); 'The Solemn Midnight' (Winter); and so on through the circle of the year. While the birds are her major theme, all nature comes in review. The last chapter, 'In the North Country,' has for its scene "a beloved nook in the Laurentian Mountains of Canada." Intense sympathy with her subject, sincerity of expression, keen and intelligent powers of observation, and a happy faculty of imparting to others what she has seen and felt characterize 'My Woodland Intimates,' and entitle Mrs. Bignell's second book to rank high among popular nature books. — J. A. A.

Walter's 'Wild Birds in City Parks.' — The full title[2] of this little brochure sufficiently explains its purpose,— to furnish "a simple letter of introduction to 100 birds, the majority of which are commonly seen during the spring migration" at Chicago. Some 'General Hints' are first given, in the form of a few characteristics of the principal bird families, followed by 'Particular Hints,' giving the leading distinctive features of 100 species, arranged apparently in no particular order. There is also a 'Table of Arrival,' giving the birds in systematic sequence, with dates of arrival for the years 1897–1901, as observed in Lincoln Park, Chicago,

---

[1] My Woodland Intimates | By | Effie Bignell | author of | "Mr. Chupes and Miss Jenny" | New York | The Baker & Taylor Company | 33–37 East 17th St., Union Square North | — 12mo, pp. i–xii + 13–241. Price, $1.00, net.

[2] Wild Birds in City Parks, being hints on identifying 100 birds, prepared primarily for the spring migration in Lincoln Park, Chicago. By Herbert Eugene Walter and Alice Hall Walter. Revised edition. Chicago: A. W. Mumford, Publisher, 378 Wabash Avenue, 1903. 16mo, pp. 45, with chart for Migration Record. Price, 25 cts.

and also other tables and charts relating to bird migration for the same period and locality. The usefulness of this effort to aid beginners in becoming acquainted with wild birds in life seems to be attested by the appearance of the present revised edition.—J. A. A.

Snow's Catalogue of Kansas Birds.—Professor Snow has recently issued a fifth edition of his Catalogue of Kansas Birds,[1] which first appeared in April, 1872, and was reissued, with additions, in July, and again in October, of the same year, the latter being commonly known as the 'second edition,' though here counted as the third. In 1875 a 'third' ("in reality the fourth") edition was issued, dated on the title-page "November, 1875," and "January, 1876," on the first page of the text, and now stated to have been "complete to Jan. 1, 1876." The history and character of these earlier editions is here given, followed by extended comment on Goss's and Lantz's Catalogues and especially on Prof. D. E. Lantz's 'Review of Kansas Ornithology,' published in 1899 (see Auk, XVI, pp. 364, 365). There is considerable criticism of Lantz's 'Review,' but the general tone seems rather hypercritical. The author treats the historic portion of his subject (pp. 1–11) at length, and in minute detail, even to points of trivial importance.

Upon this thorough foundation of criticism and research, such as the bird fauna of few States has received, Professor Snow proceeds to give us a 'Catalogue of the Birds of Kansas,' in which all species attributed to Kansas whose occurrence in the State "cannot be verified by actual captures since the opening of the University of Kansas, in September, 1886," are excluded, including 14 species entered in his earlier editions on the manuscript authority of Dr. T. M. Brewer and Prof. Spencer F. Baird. The list, as now revised and annotated, includes 342 species and subspecies, not one of which is apparently open to question. While doubtless others may be added by future captures within the State, we have here a most thorough and up-to-date exposition of the bird fauna of Kansas.—J. A. A.

Proceedings of the Nebraska Ornithologists' Union.—The Proceedings of the Third Annual Meeting of the Nebraska Ornithologists' Union forms a thick pamphlet of 108 pages, well illustrated with sixteen halftone plates and about one hundred text cuts. The meeting was held at Lincoln, Nebraska, Feb. 1, 1902, with the President, Erwin H. Barbour, in the chair and 19 members present. The officers elected for the ensuing year were: President, J. M. Bates; Vice-President, Mrs. George H.

[1] A Catalogue of the Birds of Kansas (fifth edition) with Notes upon Preceding Catalogues and Lists. By Francis H. Snow, Ph. D., LL. D., of the University of Kansas. 8vo, pp. 23, May, 1903. Reprinted from Vol. XVIII, Trans. Kansas Acad. Sciences.

Payne; Corresponding Secretary, J. C. Crawford, Jr.; Recording Secretary, R. H. Wolcott; Treasurer, August Eiche. After the usual routine business the President presented his address, entitled 'The Progenitors of Birds,' which, very fully illustrated, occupies pp. 9–39, of the 'Proceedings.' The papers read at the meeting and here published number a dozen or more, and include, among the longer articles, 'Our Winter Birds,' by M. H. Swenk (pp. 52–58, an annotated list of about 120 species); 'A Comparison of the Bird-life found in the Sand-hill Region of Holt County in 1883–'84 and in 1901,' by Lawrence Bruner (pp. 58–63); 'Some General Remarks upon the Distribution of Life in Northwest Nebraska,' by Merritt Cary (pp. 63–75, includes an annotated list of the birds); 'Notes on the Nesting of Some Sioux County Birds,' by M. A. Carriker, Jr. (pp. 75–89); 'Bird and Nest Photography,' by J. S. Trostler (pp. 89–93); 'Record of Nebraska Ornithology,' by Robert H. Wolcott (pp. 93–105, bibliography). On p. 107 is an interesting note on the Carolina Paroquet, reported to have been abundant in 1856, and to have bred on an island in the Missouri River near Brownville, in the southeastern corner of the State, but it suddenly disappeared about 1866. The 'Proceedings,' edited by Robert H. Wolcott, form an important contribution to Nebraska ornithology.—J. A. A.

Fisher on the Birds of Keam Canyon, Arizona.[1]—This is a nominal list of 39 species, preceded by several pages descriptive of the region, and general comment on the birds seen and formally listed at the end of the paper. He says: "Anyone unacquainted with the conditions of bird life in the arid regions would be disappointed with the small number of species found in Keam Canyon, and would be surprised at the meagre representation of most of them. Although considerable time between July 18 and August 3 [1894] was devoted to exploring the canyon and surrounding mesa for the purpose of observing birds, only thirty-nine species were found, and of these seven were included on single records."—J. A. A.

Stone on a Collection of Birds from Sumatra.—Mr. Stone states that this collection,[2] presented to the Academy of Natural Sciences of Philadelphia by the collectors, Messrs. Harrison and Hiller, is the "most extensive ever brought to America from this island and adds materially to our knowledge of the distribution and relationships of a number of species." The collection includes 138 species, of which one is described as new,

[1] A Partial List of the Birds of Keam Canyon, Arizona. By A. K. Fisher. The Condor, Vol. V, 1903, pp. 33–36.

[2] A Collection of Birds from Sumatra, obtained by Alfred C. Harrison, Jr., and Dr. H. M. Hiller. By Witmer Stone. Proc. Acad. Nat. Sci. Phila., 1902, pp. 670–691. Jan. 20, 1903.

and there is extended critical comment on a considerable number of others. Mr. Stone finds that a majority of the species appear to range "from the lower Malay Peninsula throughout Sumatra and many into Java without material differentiation; and a comparison of the combined lists from Deli, in the northwestern extremity of the island, with those from Lampong, in the southeastern corner, show that the majority of the species occur at both points. In fact, the high mountains of the south-central part of Sumatra seem to be the only region when a conspicuously different avifauna exists. The materials are, however, far too limited to warrant any positive statements on the matter."—J. A. A.

McGregor on Birds from Norton Sound.[1]— In June, 1900, Mr. McGregor made a trip to Norton Sound, Alaska, on the U. S. Coast and Geodetic Survey steamer 'Pathfinder,' where he spent the season, from June 27 to September 25. Although for the most part engaged in other work, he secured a collection of about two hundred bird skins, which, with his field observations, form the basis of the present paper, comprising a list of 63 species, with important and in some cases quite extended field notes. The paper is a most welcome and very interesting contribution to our knowledge of the summer bird life of the region bordering Norton Sound.—J. A. A.

McGregor on Philippine Birds.— The first number of a new publication entitled 'Bulletins of the Philippine Museum' consists of a paper by Mr. Richard C. McGregor,[2] giving the more important results of four collecting trips to various islands of the Philippine group. In these notes are recorded seven species new to the Philippine Islands, including a new *Chibia* from Cuyo Island; descriptions of previously undescribed plumages of four species; notes on some of the rarer species; and a list of new localities for a large number of previously known species, recorded for the first time from the various islands mentioned in the title of the paper, including nearly one hundred species from Ticao, where some three months were spent.

From an explanatory note in No. II of the 'Bulletins,' which gives a list of Philippine bird skins offered in exchange for first-class bird skins from "Borneo, the Moluccas, Formosa, and the Asiatic coast region adjacent to the Philippines," we learn: "The Philippine Commission has passed an act providing for the establishment of a Museum of Ethnology, Natural History, and Commerce, and has made a preliminary appropri-

[1] A list of Birds Collected in Norton Sound, Alaska, By Richard C. McGregor. The Condor, Vol. IV, 1902, pp. 135–144.

[2] On Birds from Luzon, Mindoro, Masbate, Ticao, Cuyo, Culion, Cagayan Sulu, and Palawan. By Richard C. McGregor. Bulletins of the Philippine Museum, I, Jan. 10, 1903. pp. 1–12.

ation to be used in the gathering of material pending the erection of a suitable museum building for the housing of exhibits and the preservation of study specimens. Systematic collecting of the birds and mammals of the Archipelago was begun some months since, and will be steadily prosecuted." The work is under the able direction of Prof. Dean C. Worcester, Secretary of the Interior, and well-known for his excellent work on the ornithology of the Philippines, of which only some of the preliminary results have yet been published. Mr. McGregor is evidently proving a most valuable aid in carrying out the work above outlined.—J. A. A.

Bangs on New Subspecies of American Birds.— During the last few months Mr. Bangs has characterized, in a series of papers in the 'Proceedings' of the New England Zoölogical Club, a number of new subspecies of American birds, as follows: (1) *Parus carolinensis impiger*,[1] based on specimens from the vicinity of Lake Ashby, Florida, which differ from the northern form in much smaller size and more brownish gray back. (2) *Thryophilus galbraithi conditus*,[2] from San Miguel Island, Bay of Panama. (3) *Cardinalis cardinalis magnirostris*,[3] from West Baton Rouge Parish, Louisiana, characterized by larger and heavier bill, as compared with its allies. (4) *Vireosylvia josephæ chiriquensis*,[4] from Boquete, Volcan de Chiriqui, differing in yellower underparts and brighter olive green back from *V. josephæ*, described from Pallatanga, Ecuador. (5) *Merula leucauchen cnephora*,[5] from the same locality as the last. (6) *Ardea herodias cognata*,[6] based on a single specimen from the Galapagos Islands, with paler colors, smaller size and larger bill than North American specimens of *A. herodias*. (7) *Scotothurus veræpacis dumicola*,[7] a dark southern form of *S. veræpacis*. (8) *Manacus candei electilis*,[8] a new name for the Mexican form.—J. A. A.

Bangs's Revised List of Birds of the Liu Kiu Islands.[9]—A nominal

---

[1] A New Race of the Carolina Chickadee from Southern Florida. Proc. N. Engl. Zoöl. Club, Vol. IV, pp. 1, 2, March 16, 1903.

[2] A New Wren from San Miguel Island, Bay of Panama. *Ibid.*, pp. 3, 4.

[3] The Louisiana Cardinal. *Ibid.*, pp. 5–7.

[4] A New Race of *Vireosylvia josephæ* from Chiriqui. *Ibid.*, pp. 9, 10.

[5] Description of a New Thrush from Chiriqui. *Ibid.*, Vol. III, pp. 91, 92, Oct. 10, 1902.

[6] Description of a New Race of the Great Blue Heron from the Galapagos Islands. *Ibid.*, pp. 99, 100, Feb. 6, 1903.

[7] A New Race of *Scotothurus veræpacis* from Chiriqui. *Ibid.*, pp. 103, 104.

[8] Description of a New Subspecies of *Manacus candei* (Pazurd.). *Ibid.*, pp. 105, 106.

[9] Stejneger's Catalogue of Birds thus far recorded from the Liu Kiu Islands, Japan, revised with Additions to date. Proc. N. Engl. Zoöl. Soc., III, pp. 93–97, Feb. 6, 1903.

list, bringing Dr. Stejneger's list, published in 1887 (77 species), down to date, with introductory comment, the number of species now recorded being 99.—J. A. A.

Barrett Hamilton on the Position of the Legs of Birds during Flight.—In a paper[1] of about a dozen pages the author briefly summarizes what had been previously published on the subject and adds his own observations and some others previously unpublished. The paper closes with a list of the species observed, arranged in the two categories: 'Legs carried pointing backward,' and 'Legs carried bent forward.' The latter consists almost wholly of passerine birds, while the former includes birds of all the other orders. The legs of birds, it is noted, often afford great and constant assistance in flight. "It is almost as if, to some birds, the legs are nearly more important as organs of flight than of progression on land."—J. A. A.

Dubois's 'Synopsis Avium.'—Since our last notice of this important work (Auk, XIX, Oct., 1902, p. 409) two additional parts (XI and XII) have come to hand, carrying the subject into the Herodiones. Part XI includes the Columbæ, Heteroclitæ, Crypturi, Gallinæ, and part of the Accipitres; Part XII completes the Accipitres and Striges, and includes a large part of the Herodiones.—J. A. A.

North's Nests and Eggs of Australian Birds.—A second edition of Mr. Alfred J. North's Nests and Eggs of Australian and Tasmanian Birds[2] is being issued in parts, of which Part I appeared in June, 1901, Part II in April, 1902, and Part III in April, 1903. The size is full quarto, and it is tastefully printed on heavy paper, with colored plates and many figures of nests, heads, and full-length figures of the birds in the text. Part I contains the Corvidæ, and part of the Paradiseidæ, which occupy the greater portion of Part II. Then follow the Campophagidæ, completed in Part II, and the great family Muscicapidæ runs through Part III. Descriptions are first given of the birds, with a few bibliographical references, and a statement of the range. Then follows the biographical matter,

---

[1] On the Position occupied by the Legs of Birds during Flight. By G. E. H. Barrett-Hamilton. The Zoölogist, April, 1903, pp. 139–149. Also separate, repaged.

[2] Nests and Eggs of Birds found Breeding in Australia and Tasmania. By Alfred J. North, C. M. Z. S., Ornithologist, Australian Museum. (Second edition of Catalogue No. XII, entirely rewritten, with additions.) Printed by order of the Trustees of the Australian Museum; R. Ethridge, Jr., J. P., Curator (= Australian Museum, Sydney. Special Catalogue, No. I.) Part I, pp. 1–36, pll. A1, B1, June 11, 1901; Part II, pp. 37–120, pll. B2, B3, B4, April 25, 1902; Part III, pp. 121–201, pll. A2, A3, A4, April 27, 1903.

often quite extended, dealing with the general habits of the species as well as its nest and eggs. Naturally much space is given to the history of the Bower-birds, with illustrations of their bowers as well as of their nests and eggs. The work is admirable in design, and Mr. North's well-known attainments as an authority on the Australian ornis is a guaranty of thoroughness in the execution of this great undertaking. — J. A. A.

Madarázs's Birds of Hungary.[1] — This forms a quarto volume of about 700 pages, illustrated with nine plates, most of them colored, and 170 text figures, mostly of heads and structural details. It is published, unfortunately for English readers, in the Hungarian language, but there is a summary of the work in German, forming nearly one third of the volume. This is a systematic, annotated list of the 364 species authentically recorded as found in Hungary, with a statement of their manner of occurrence and distribution, with references to the main text where they are fully described, with synonymy and other technical details. The work is by a master, and must prove of great convenience and importance to students of the Hungarian ornis. It is published by the National Museum at Budapest, and is in every way a most creditable example of bookmaking. It originally appeared in fifteen parts, issued at irregular intervals from October, 1899, to April, 1903.— J. A. A.

Seth-Smith's Handbook of Parrakeets.— Parts I–V of this attractive work[2] have appeared during the last year. It relates especially, as the title indicates, to such species as are kept in captivity, and these are very numerous. The external characters of the species are given briefly, with some account of their distribution and habits, but more special reference is made to their habits, hardiness, etc., in captivity, and their proper food and treatment under such artificial conditions. In some cases quite extended accounts are given of their habits in their native wilds. Some five pages are given to the history of our "Carolina Conure," as here called, which, in view of its approaching extermination has a sad interest. The 17 colored plates thus far issued give very satisfactory figures

---

[1] A Magyar Nemzeti Muzeum Kiadványa. Magyarország Madarai. A Hazai Madárvilág Megismerésének Vezérfolnala. 170 Eredeti szövegrajzzal és 9 Mümelléklettel. Irta Dr. Madarász Gyula. M. N. Muzeumi Igazgató-ör. Anhang: Die Vögel Ungarns auszug in Deutscher Sprache. Budapest, 1899–1903. Ára 40 korona. 4to, pp. xxiv + 666, pll. ix, and 170 text figures.

[2] Parrakeets: being a practical Handbook to those Species kept in Captivity. Royal 8vo, to be completed in 6 parts, with text figures and colored plates. London: R. H. Porter. Price, 6s net per part. Part I, June, 1902, pp. 1–40, 4 pll.; Part II, August, 1902, pp. 41–80, 3 pll.; Part III, Dec., 1902, pp. 81–128, 3 pll.; Part IV, April, 1903, pp. 129–168, 3 pll.; Part V, pp. 169–216, 4 pll.

of 28 species, and there are many excellent full-length text cuts of additional species. The book will have much interest as a popular account of a very attractive group of birds, and will be, of course, of special value to aviculturalists.—J. A. A.

Shufeldt on the Osteology of the Steganopodes.[1]—In a quarto memoir of over one hundred pages, illustrated with numerous text figures and ten half-tone plates, Dr. Shufeldt here presents at length the results of his studies of the osteology and relationships of the Steganopodes. He first summarizes the classifications proposed for the group by previous authors and their views as to the relationships of the several types composing the group, and then proceeds to a detailed comparative description of the osteology of *Phaëthon*, *Sula*, *Anhinga*, *Phalacrocorax*, *Pelecanus*, and *Fregata*. He closes with some remarks on the classification of the several types composing the order, which he divides into three superfamilies (Pelecanoidea, Phaëthontoidea, Fregatoidea), the first embracing the families Pelecanidæ, Phalacrocoracidæ, Anhingidæ, and Sulidæ, the others comprising each a single family, consisting respectively of the genera *Phaëthon* and *Fregata*. Of the other families, each is also monotypic, as regards genera, except Phalacrocoracidæ, to which are referred the two genera *Phalacrocorax* and *Nannopterum*. His arrangement thus agrees with Dr. Stejneger's, proposed in 1882, and followed in the A. O. U. Check-List.—J. A. A.

Shufeldt on the Classification of Certain Groups of Birds.[2]—The groups are the 'superorders' Archornithiformes (consisting of *Archæopteryx*), the Dromæognathæ (comprising the Ostriches, Rheas, Emues, and Cassowaries, and the extinct Moas and the Roc (*Æpyornis*), and the Odontoholcæ (the extinct Hesperornithidæ and Ænaliornithidæ. Extended quotations are given from Huxley, Forbes, the Parkers (W. K. and T. J.), Marsh, and others, from which sources a summary of the structural characters of the diverse members composing these groups is here presented. The superorder Archornithiformes equals the 'subclass' Saururæ of many recent authors; the superorder Dromæognathæ includes all the existing and extinct struthionine birds, and is divided into five 'suborders', as follows: Struthiornithes, Rheornithes, Casuariornithes, Dinornithes, and Æpyornithes. Each of these is treated at considerable length, their differential characters noted, and those of their constituent

---

[1] The Osteology of the Steganopodes. By R. W. Shufeldt, M. D. Memoirs of the Carnegie Museum. Vol. I, No. 3, 1903, pp. 109–223, pll. xxi–xxx, and 37 text figures.

[2] On the Classification of Certain Groups of Birds. (Superorders: Archornithiformes; Dromæognathæ; Odontoholcæ). By R. W. Shufeldt. Amer. Nat., Vol. XXXVII, Jan., 1903, pp. 33–64, and 2 half-tone plates.

families. The 'superorder' Odontoholcæ embraces the family Hesperornithidæ, of the Middle Cretaceous of Kansas and Colorado, and provisionally the Enaliornithidæ of the Upper Greensand. Both groups are considered as probably ancestral forms of the Pygopodes.— J. A. A.

Publications Received. — Bangs, Outram. (1) A New Race of the Carolina Chickadee from Southern Florida. (Proc. N. Engl. Zoöl. Club, IV, March, 1903, pp. 1, 2.) (2) A New Wren from San Miguel Island, Bay of Panama. (*Ibid.*, pp. 3, 4.) (3) The Louisiana Cardinal. (*Ibid.*, pp. 5–7.) (4) A New Race of *Vireosylvia josephæ* from Chiriqui. (*Ibid.*, pp. 9, 10.) (5) Stejneger's Catalogue of Birds thus far recorded from the Liu Kiu Islands, Japan, revised with additions to date. (*Ibid.*, Feb. 1903, pp. 93–97.) (6) Description of a New Thrush from Chiriqui. (*Ibid.*, pp. 91, 92.) (7) Description of a New Race of the Great Blue Heron from the Galapagos Islands. (*Ibid.*, pp. 99, 100.) (8) Description of a New Subspecies of *Manacus candei* (Parzud.). (*Ibid.*, pp. 105, 106.) (9) A New Race of *Scotothorus veræpacis* from Chiriqui. (*Ibid.*, pp. 103, 104.)

Barrett-Hamilton, G. E. H. On the Position occupied by the Legs of Birds during Flight. (Zoölogist, 1903, pp. 139–149; also separate, *repaged.*)

Dutcher, William. (1) Nighthawk (*Chordeiles virginianus*). (National Committee of Audubon Societies, Leaflet No. 1.) (2) The Mourning Dove (*Zenaidura carolinensis*). (*Ibid.*, No. 2.) (3) The Meadowlark. (*Ibid.*, No. 3.) (4) The Robin. (*Ibid.* No. 4.)

Elrod, Morton J. A Biological Reconnoissance in the Vicinity of Flathead Lake. (Bull. University of Montana, Biolog. Ser., No. 3.)

Finsch, O. (1) Zur Catalogisirung der ornithologischen Abtheilung. X. Indicatorinæ. (Notes from the Leyden Museum, XXVIII, pp. 162–179.) (2) Ueber einen neuen Nashornvogel der Gattung *Penelopides* Reichb. (*Ibid.*, pp. 190–194.) (3) Ueber die Arten der Bucerotiden Gattung *Ortholophus* Grant. (*Ibid.*, pp. 195–205.) (4) Ueber zwei bisher verkannte Arten: *Pitta angolensis* Vieill. und *P. pulith* Fraser. (*Ibid.*, p. 206–212.)

Fisher, A. K. A Partial List of the Birds of Keam Canyon, Arizona. (Condor, V, No. 2, 1903, pp. 33–36.)

Howe, Reginald Heber, Jr. A List of the Birds of Florida. (Contr. to N. Am. Orn., I, 1903, pp. 39–42.)

Madarász, Julius von. (1) Magyarország Madarai. 4to, pp. xxxiii + 606, pl. i–ix and many text cuts. Budapest: National Museum, 1899–1903. (2) Vorläufiges über einen neuen Rohrsänger (*Lusciniola mimica*).

McGregor, Richard C. (1) Notes on a small collection of Birds from the Island of Maui, Hawaii. (Condor, IV, 1902, pp. 59–62.) (2) A List of Birds collected in Norton Sound, Alaska. (*Ibid.*, 135–144.)

Mearns, Edgar A. (1) Description of a New Swallow from the Western United States. (Proc. Biol. Soc. Wash., XV, 1902, pp. 31, 32.) (2) Feathers beside the Styx. (Condor, V, 1903, pp. 36–38.)

Mearns, Louis di Z. A List of the Birds observed on the Island of

Rhode Island and the adjacent waters. (Notes on R. I. Orn., III, Nos. 2–4, 1902.)

Meyer, A. B. (1) Neue Vögel von Celebes. (Notes from the Leyden Museum, XXIII, pp. 185–189.) (2) On the eggs of the Moa. (Ibis, April, 1903, pp. 188–196.)

North, Alfred J. Nests and Eggs of Birds found Breeding in Australia and Tasmania. Second Ed. Parts 1–3. 4to, with plates. Australian Museum, Sydney.

Sanford, Leonard C., L. B. Bishop and T. S. Van Dyke. The Water-Fowl Family. 8vo, pp. viii + 598, illustrated. The Macmillan Company London and New York, 1903. Price, $2.00.

Scott, W. E. D. The Story of a Bird Lover. 8vo, pp. xii + 322. The Outlook Company, New York, 1903. Price, $1.50.

Seth-Smith, David. Parakeets. Parts 4 and 5, April and June, 1903. London: R. H. Porter.

Shufeldt, R. W. Osteology of the Steganopodes. (Mem. Carnegie Museum, I, No. 3, pp. 109–223, pll. xxi–xxx.)

Snow, Francis H. A Catalogue of the Birds of Kansas. Fifth Edition, 8vo, pp. 23, May, 1903.

Stone, Witmer. A Collection of Birds from Sumatra, obtained by Alfred C. Harrison, Jr., and Dr. H. M. Miller. (Proc. Acad. Nat. Sci. Phila., 1902, pp. 670–691, Jan. 20, 1903.)

Stone, Witmer, and James A. G. Rehn. On the Terrestrial Vertebrates of Portions of New Mexico and Western Texas. (Proc. Acad. Nat. Sci. Phila., 1903, pp. 16–34. May 7, 1903.)

Walter, Herbert Eugene, and Alice Hall Walter. Wild Birds in City Parks. Revised Ed. A. W. Mumford, Chicago, Price, 25 cts.

American Ornithology, III, Nos. 4–6, April–June, 1903.

Annals of Scottish Nat. Hist., No. 46, April, 1903.

Atlantic Slope Naturalist, The, I, Nos. 1, 2, 1903.

Avicultural Magazine, New Ser., I, Nos. 6–8. April–June, 1903.

Bird-Lore, V, Nos. 2, 3, 1903.

Birds and Nature, XIV, April–June, 1903.

Boletim do Museu Parense, III, Nos. 3, 4, 1902.

Bulletin British Orn. Club, XIII, Nos. XCVI–XCVIII, 1903.

Bulletin of the Michigan Orn. Club, IV, No. 1, March, 1903.

Bulletin of the Wisconsin Nat. Hist. Soc., II, No. 4, Oct. 1902.

Bulletins of the Philippine Museum, Nos. 1 and 2, 1903.

Condor, The, V, Nos. 2 and 3, 1903.

Emu, The, II, No. 4, April, 1903.

Forest and Stream, LX, Nos. 13–26, 1903.

Journal of the Maine Orn. Society, V, No. 2, April, 1903.

Knowledge, XXVI, Nos. 210–212, April–June, 1903.

Naturalist, The, A Monthly Journ. of Nat. Hist. for North of England, Nos. 555–557, April–June, 1903.

Ornithologische Monatsberichte, XI, Nos. 4–6, April–June, 1903.

Ornithologische Monatsschrift, XXVIII, Nos. 1–5, Jan.–May, 1903.

Ornitholisches Jahrbuch, XIV, Heft 3–4, June, 1903.

Ottawa Naturalist, XVII, Nos. 1–3, April–June, 1903.

Our Animal Friends, XXX, Nos. 8–10, April–June, 1903.

Proceedings Acad. Nat. Sci. Philadelphia, Part 3, 1902 (1903).

Proceedings of the Nebraska Ornithologists' Union, Third Ann. Meeting, 1902.

Proceedings and Transactions of the Nova Scotia Inst. of Science X, Part 4, March, 1903.

Revista do Museu Paulista, V, 1902.

Wilson Bulletin, The, X, Nos. 1 and 2, March and June, 1903.

Science, N. S., XVII, Nos. 429–443, 1903.

Wombat, The, V, No. 4, Dec. 1902.

Zoölogical Quarterly, I, No. 1, May 15, 1903 (Pennsylvania Depart. of Agriculture).

Zoölogist, The, (4) VII, Nos. 76–78, April–June, 1903.

NOTES AND NEWS.

THOMAS EDWARDS SLEVIN, an Associate of the American Ornithologist's Union, died at his home in San Francisco on December 23, 1902, in his 32nd year. He was born in New York City on January 20, 1871. A year of his early childhood was spent in France. In 1878 he removed with his parents to San Francisco. He came of a race of students, both on his mother's side, Bruguiére, and on his father's side. His father, Thomas Edwards Slevin, LL. D., was vice-president of the Geographical Society of the Pacific.

The genius to make collections was strongly developed in the Slevin family. Mr. Slevin's grandfather gathered a large library, and his father collected the Slevin Library of works relating chiefly to the Pacific coast — now a part of the public library of San Francisco.

Mr. Slevin's interest in birds dated from his thirteenth year, when he made his first attempt at forming a collection. In later years, he attained a very high degree of skill in the preparation of specimens; in the smaller birds, his specimens, for durability and beauty of finish, are not excelled by the work of the leading preparators in this country. To the very last he was eager to improve in his methods. His collection of birds numbered about three thousand specimens, and was built up in leisure moments after office hours, on holidays, and during vacations. It is now incorporated with the study series of the California Academy of Sciences and is a monument to his earnest effort.

Mr. Slevin received his school education at St. Ignatius College, San Francisco. From his father and mother, he learned to speak French fluently. He was a member of the California Academy of Sciences, its Section of Ornithology, and the Cooper Ornithological Club.

He had in a marked degree that inborn gift to recognize at a glance and remember the differences in specimens. An exotic species once seen, its characters were indelibly fixed in his mind. If ornithology had been to him a profession, rather than his recreation, he would have attained distinction as a systematic ornithologist. He loved ornithology for the sake of ornithology — not for scientific eminence or for position. Within a few days of his death, in the closing hours of a long, painful illness, he had his mother read to him the bird portion of 'North American Fauna No. 22,' which had just reached him. Two days before the end, he told me, with a smile, that Ridgway had come, meaning he had received Part II of 'The Birds of North and Middle America.'

Mr. Slevin's preëminent characteristic was truthfulness; he was a man whose word could be absolutely relied upon.— L. M. L.

GEORGE H. READY, an Associate of the American Ornithologists' Union, died at his home in Santa Cruz, California, March 20, 1903, in his 45th year. From a notice of Mr. Ready in 'The Condor' (V, p. 82) we learn that he was born in Placerville, Placer County, California, August 5, 1858, but while still a boy went to Santa Cruz, which became his permanent home. "Four years ago, from overwork and exposure, he contracted a cold from which he never recovered. He spent several years in Phoenix, Arizona, hoping the dry air of that region would restore his health. But he afterwards wisely concluded that the comforts of a home in Santa Cruz would be a greater solace and quite as likely a restorer .... He was an amateur ornithologist, and the birds of the region in and about Santa Cruz and Phoenix were his familiar friends, few knowing their haunts as well as he."

MRS. E. S. MOGRIDGE, well known in this country and in England as a modeler of plant accessories for bird groups, and for groups illustrating the life history of insects injurious to forest trees, died at Springfield, Mass., April 5, 1903. While at this writing we know little of her early personal history, it is proper that some record should be here made of her services to science, through her facsimile reproductions of foliage, flowers, and other plant accessories for various American Museums. In this she was assisted by her brother, Mr. H. Mintorn. They first worked on accessories for insect groups for Lord Walsingham, and for bird groups at the South Kensington Museum, London, where, about 1885 or 1886, their work attracted the attention of Mr. Morris K. Jesup, President of the American Museum of Natural History in New York. Mrs. Mogridge frequently visited New York, where she had many friends, and

while on a visit here in 1877, arrangements were made with her to assist in the preparation of bird groups, and later insect groups, for the American Museum, and she was thus engaged, with her brother, at intervals during the remainder of her life. Other museums also profited by her skill, including the U. S. Department of Agriculture at Washington, the Carnegie Museum at Pittsburgh, the Field Columbian Museum at Chicago, the Brooklyn Institute, and the Natural History Museum at Springfield, Mass., where she left uncompleted work. The late Mrs. R. L. Stuart of New York City was one of her warm friends and patrons, Mrs. Stuart generously providing the means for the construction of a large series of bird groups for the American Museum. Mrs. Mogridge was a woman of rare skill in her special line of work, exceedingly conscientious, and personally a most agreeable and cultured woman. The last twenty years of her life were passed in America, with occasional visits to England. She imparted her art to a considerable number of students, who came to her for instruction, so that the kind of work she first introduced in this country is now carried on at quite a number of our larger museums.

THE ATLANTIC SLOPE NATURALIST, edited and published bimonthly at Nazereth, Pa., by W. E. Rotzell, M. D., is among the later new aspirants to fame, of which two numbers have thus far appeared, No. 1, for March–April, and No. 2, for May–June. Although general in scope, as its name implies, the first two numbers are mainly ornithological, and contain bird notes of general interest. The editorial announcement states that "It will be devoted to natural history in general and that of the Eastern United States in particular." It is intended as "a medium through which observations may be recorded, opinions may be expressed, questions may be asked, and specimens announced for exchange." The subscription price is 30 cts. a year.

A NEW journal called 'The Zoölogical Quarterly' has made its appearance, Volume I, No. 1, bearing date May 15, 1903. It is edited by H. A. Surface, M. S., Economic Zoölogist of the Department of Agriculture of Pennsylvania, and is to be issued quarterly from his office at Harrisburg, Pa., as an official medium of publication.

The first number, also bears the title 'Zoölogical Circular, No. 1,' and carries the general title 'Birds around the Farm,' with the subheadings: 'I. Bird Houses and Nesting Sites' (illustrated); 'II. Their Economic Value, Destruction and Preservation'; 'III. Bird Study: Its Educational Value and Methods.'

THE ANNUAL MEETING of the Delaware Valley Ornithological Club was held at the Academy of Natural Sciences, Philadelphia, January 2, 1903.

Sixteen meetings were held during 1902, with an average attendance of eighteen; forty-six members attending one or more of the meetings during the year.

The Club has undertaken a study of the spring bird migration in the Delaware Valley with very satisfactory results and by soliciting the coöperation of any competent observers has brought itself in touch with a large number of bird students not included in its membership.

The more important papers of the year were, 'Gulls and Terns of the Maine Coast,' by W. L. Baily; 'The Germantown Grackle Roost,' by A. C. Emlen; 'A Trip to Chihuahua, Mex., by Dr. W. E. Hughes; 'An Expedition to southern New Mexico,' by J. A. G. Rehn; 'Some Old Testament Birds,' by S. N. Rhoads; 'The 1902 Flight of White Herons,' by W. B. Evans.

The second number of 'Cassinia,' covering the proceedings of 1902, was issued in February.

The officers for the present year are: President, C. J. Pennock; Vice-President, Wm. A. Shryock; Secretary, Wm. B. Evans; Treasurer, Stewardson Brown.

THE FOURTH ANNUAL MEETING of the Nebraska Ornithologists' Union was held in Lincoln, Neb., January 24, 1903, on which occasion the following papers were read: President's address — 'Birds and Man,' Rev. J. M. Bates; 'Educational Value of Bird Study,' Mrs. C. S. Lobingier; 'Devices for Interesting Children in Bird Study,' Miss Anna Caldwell; 'Observations on the Number of Birds to the Square Mile in Custer County,' Rev. J. M. Bates; 'The Crow in Nebraska,' Wilson Tout; 'The Birds of the Niobrara Valley,' Myron Swenk; 'Birds of Cherry County, Neb.,' Dr. R. H. Wolcott; 'Remarks on a Record of Nebraska Ornithology,' Dr. R. H. Wolcott.

The following officers were elected: President, F. H. Shoemaker, Omaha; Vice-President, Miss Anna Caldwell, Lincoln; Corresponding Secretary, J. C. Crawford, Jr., West Point; Recording Secretary and Editor (permanent), Dr. R. H. Wolcott, University of Nebraska; Treasurer, Mr. August Eiche, Lincoln. The office of Custodian was created as a permanent office and Myron Swenk, of Lincoln, appointed to fill it.

Newly elected members raised the total membership of the society to nearly two hundred.

The presentation of a considerable amount of material, including many skins on which records are based, was reported, and it was resolved to secure, if possible, for the collection, all the material in the State, upon which the past records of the occurrence of rare birds in Nebraska had been based.

A committee was appointed to complete the formal organization of the Audubon Auxiliary and to put in definite shape terms of affiliation between it and the Union.

MR. WILLIAM H. KOBBÉ, Yale Forest School, New Haven, Conn., is preparing a paper entitled 'Birds in Their Relation to Forestry,' and would be very grateful for any information from the readers of 'The Auk' concerning this subject. He wishes particularly notes regarding the action of birds in the dissemination of seeds and in the destruction of injurious *forest* insects. The opinion of ornithologists in regard to the benefit or the reverse of Woodpeckers to the forest would also prove of value. All information used will of course be acknowledged by the author.

FROM THE recently published Seventh Annual Report of the New York Zoölogical Society we learn that during the year 1902 the bird collection was not sensibly increased, owing to the fact that no additional buildings or aviaries could be provided, the construction of the proposed Ostrich House having been necessarily deferred. A number of important species were added, however, and the successful breeding of several species is announced. The attempt to colonize the Osprey, through the introduction of a nest and some young birds from Gardner's Island, in a state of freedom within the Park proved a failure. As soon as the young birds acquired the power of strong flight "they flew away and failed to return." Similar efforts with young gulls were also unsuccessful. Several species of wild ducks, however, as the Wood Duck, Mallard, Widgeon, and Redhead are frequently seen about the pools in the Park and several species of herons are observed, attracted by their relatives in the great Flying Cage. The number of species in the bird collection on December 31, 1902, was 193, represented by 680 individuals.

In this same volume (pp. 154–159) the Curator of the Department of Birds, Mr. C. William Beebe, has an interesting paper entitled, 'Some Notes on the Psychology of Birds.' It is a pleasure to note that the fine opportunity here offered for this kind of research is being so intelligently utilized.

THE EGGS OF THE MOA forms the subject of an interesting paper in 'The Ibis' for April (Ibis, 1903, pp. 188–196), by Dr. A. B. Meyer, in which he gives the history and present ownership of four nearly perfect Moa's eggs, which represent three species; also four more or less imperfect eggs, and models of five others. The eight of which the localities are known are all from South Island, New Zealand. Dr. Meyer says: "Moa's eggs are very much rarer than those of *Æpyornis*, thirty-six of the latter being known, whereas only three or four perfect Moa's eggs are as yet recorded, besides a dozen or more imperfect or reconstructed specimens." The eggs vary greatly in dimensions, the largest, "a nearly perfect" egg of *Dinornis novæ-zelanidæ* Owen, in the Rowley Collection, measuring 252 by 178 mm., and a perfect egg of *Pachyornis elephantopus?*, 195 by 135 mm. "Owen constructed the egg of *Dinornis maximus* to 412 by 326 mm."

TWELFTH SUPPLEMENT TO THE AMERICAN ORNITHOLOGISTS' UNION CHECK-LIST OF NORTH AMERICAN BIRDS.[1]

Two sessions of the Committee have been held in Washington since the appearance of the last Supplement. At the first meeting (November 21, 1902) questions of generic and subgeneric rank only were considered, and much progress was made toward eliminating these from the category of deferred cases. In April (16 to 18) of the present year a longer meeting was held, at which many additional cases were discussed, but action on certain generic names (*e. g.*, *Horizopus*) was again postponed, owing to lack of time for their proper consideration.

The list of deferred cases is still formidable, but it is hoped that at the next meeting of the Committee the number of such cases will be very materially reduced.

Committee. C. HART MERRIAM, *Chairman.*
J. A. ALLEN.
WILLIAM BREWSTER.
JONATHAN DWIGHT, JR.
CHARLES W. RICHMOND.
ROBERT RIDGWAY.
WITMER STONE.

I. ADDITIONS TO THE CHECK-LIST AND ACCEPTED CHANGES IN NOMENCLATURE.

86*a*. **Fulmarus glacialis minor** (KJAERBŒLLING). This is eliminated from the Check-List as indistinguishable from *F. glacialis*, the alleged characters being the result of sexual or

[1] Four Supplements have been issued since the publication of the Second Edition of the Check-List in 1895:
Eighth Supplement, Auk, XIV, 1897, pp. 117–135.
Ninth Supplement, Auk, XVI, 1899, pp. 97–133.
Tenth Supplement, Auk, XVIII, 1901, pp. 295–320.
Eleventh Supplement, Auk, XIX, 1902, pp. 315–342.

individual variation. (*Cf.* CHAPMAN, Bull. Amer. Mus. N. H., XII, 1899, 229.)

96.1. **Puffinus cuneatus** SALVIN.

Wedge-tailed Shearwater.

Puffinus cuneatus SALVIN, Ibis, 1888, 353.

[B —, C —, R —, C —.]

GEOG. DIST. — North Pacific Ocean, from the Hawaiian Islands north to the Bonin Group and Lower California. (*Cf.* BREWSTER, Bull. Mus. Comp. Zoöl., XLI, 1902, 30.)

96.2. **Puffinus bulleri** SALVIN.

New Zealand Shearwater.

Puffinus bulleri SALVIN, Ibis, 1888, 354.

[B —, C —, R —, C —.]

GEOG. DIST.— New Zealand, north casually to California. (*Cf.* LOOMIS, Proc. Cal. Acad. Sci., ser. 3 (Zoöl.), II, 1900, 319.)

193. **Ardea wardi** RIDGW. This becomes a subspecies of *Ardea herodias*, to stand as

194*b*. **Ardea herodias wardi** (RIDGWAY).

Ward's Heron.

Ardea wardi RIDGWAY, Bull. Nutt. Orn. Club, VII, Jan. 1882, 5.

Ardea herodias wardi CHAPMAN, Bull. Am. Mus. N. H., XIV, 1901, 89.

[B —, C —, R —, C —.]

GEOG. DIST. — Florida, possibly extending along the Gulf Coast to Texas. (*Cf.* CHAPMAN, Bull. Amer. Mus. N. H., XIV, 1901, 88.)

The various subgenera of Ardeidæ in the Check-List are raised to generic rank, as follows:

GENUS **HERODIAS** BOIE.

Herodias BOIE, Isis, 1822, 559. Type, by elimination, *Ardea egretta* GMELIN.

The only North American species will stand as

196. **Herodias egretta** (GMELIN).

Ardea egretta GMELIN, S. N., I, ii, 1788, 629.

Herodias egretta CABANIS, Journ. f. Orn., 1856, 341.

GENUS **EGRETTA** FORSTER.

Egretta FORSTER, Synop. Cat. Brit. Birds, 1817, 59. Type, *Ardea garzetta* LINNÆUS.

Egretta is equivalent to *Garzetta* of the Check-List, over which name it has priority, *Garzetta* KAUP dating from 1829, and *Egretta* FORSTER from 1817.

197. **Egretta candidissima** (GMELIN).

Ardea candidissima GMELIN, S. N., I, ii, 1788, 633.

Egretta candidissima GOSSE, Birds Jamaica, 1847, 336.

GENUS **DICHROMANASSA** RIDGWAY.

Dichromanassa RIDGWAY, Bull. U. S. Geol. & Geogr. Surv. Terr., IV, 1878, 246. Type, *Ardea rufa* BODDAERT.

198. **Dichromanassa rufescens** (GMELIN).

Ardea rufescens GMELIN, S. N., I, ii, 1788, 628.

Dichromanassa rufescens A. O. U. Committee.

GENUS **HYDRANASSA** BAIRD.

Hydranassa BAIRD, Pacific R. R. Reports, IX, 1858, 660. Type, *Ardea ludoviciana* WILSON (= *Egretta ruficollis* GOSSE).

199. **Hydranassa tricolor ruficollis** (GOSSE).

Egretta ruficollis GOSSE, Birds Jamaica, 1847, 338.
Hydranassa tricolor ruficollis A. O. U. COMMITTEE.

GENUS **FLORIDA** BAIRD.

Florida BAIRD, Pacific R. R. Reports, IX, 1858, 671. Type, *Ardea cærulea* LINNÆUS.

200. **Florida cærulea** (LINNÆUS).

Ardea cærulea LINNÆUS, S. N. ed. 10, I, 1758, 143.
Florida cærulea BAIRD, Pacific R. R. Reports, IX, 1858, 671.

GENUS **BUTORIDES** BLYTH.

Butorides BLYTH, Cat. Birds Mus. Asiat. Soc., 1849 (1852), 281. Type, *Ardea javanica* HORSFIELD.

201. **Butorides virescens** (LINNÆUS).

Ardea virescens LINNÆUS, S. N. ed. 10, I, 1758, 144.
Butorides virescens BONAPARTE, Consp. Av., II, 1855, 128.

201*a*. **Butorides virescens frazari** (BREWSTER).

Ardea virescens frazari BREWSTER, Auk, V, Jan. 1888, 83.
Butorides virescens frazari A. O. U. COMMITTEE.

201*b*. **Butorides virescens anthonyi** (MEARNS).

Ardea virescens anthonyi MEARNS, Auk, XII, July, 1895, 257.
Butorides virescens anthonyi A. O. U. COMMITTEE.

GENUS **NYCTANASSA** STEJNEGER.

Nyctanassa STEJNEGER, Proc. U. S. Nat. Mus., X, 1887, 295. Type, *Ardea violacea* LINNÆUS.

203. **Nyctanassa violacea** (LINNÆUS).

Ardea violacea LINNÆUS, S. N. ed. 10, I, 1758, 143.

Nyctanassa violacea SHARPE, Bull. Brit. Orn. Club, V, 1895, XI.

The following groups of Limicolæ are given full generic rank (*cf.* COUES, Osprey, III, 1899, 144):

GENUS **ARQUATELLA** BAIRD.

Arquatella BAIRD, Pacific R. R. Reports, IX, 1858, 717. Type, *Tringa maritima* BRÜNNICH.

235. **Arquatella maritima** (BRÜNNICH).

Tringa maritima BRÜNNICH, Orn. Borealis, 1764, 54.

Arquatella maritima COUES, Proc. Acad. Nat. Sci. Phila., 1861, 183.

236. **Arquatella couesi** RIDGWAY.

Arquatella couesi RIDGWAY, Bull. Nutt. Orn. Club, V, July, 1880, 160.

237. **Arquatella ptilocnemis** (COUES).

Tringa ptilocnemis COUES, Elliott's Rept. Seal Isl. Alaska, 1873 (not paged).

Arquatella ptilocnemis RIDGWAY, Proc. U. S. Nat. Mus., III, 1880, 199.

GENUS **ACTODROMAS** KAUP.

Actodromas KAUP, Skizz. Entw.-Gesch. Eur. Thierw., 1829, 55. Type, *Tringa minuta* LEISLER.

238. **Actodromas acuminata** (HORSFIELD).

Totanus acuminatus HORSFIELD, Trans. Linn. Soc. Lond., XIII, 1821, 192.

Actodromas acuminatus RIDGWAY, Proc. U. S. Nat. Mus., III, 1880, 199.

239. **Actodromas maculata** (VIEILLOT).

Tringa maculata VIEILLOT, Nouv. Dict. d'Hist. Nat., XXXIV, 1819, 465.

Actodromas maculata COUES, Proc. Acad. Nat. Sci. Phila., 1861, 197.

240. **Actodromas fuscicollis** (VIEILLOT).

Tringa fuscicollis VIEILLOT, Nouv. Dict. d'Hist. Nat., XXXIV, 1819, 461.

Actodromas fuscicollis BONAPARTE, Comptes Rendus, XLIII, 1856, 596.

241. **Actodromas bairdii** COUES.

Actodromas bairdii COUES, Proc. Acad. Nat. Sci. Phila., 1861, 194.

242. **Actodromas minutilla** (VIEILLOT).

Tringa minutilla VIEILLOT, Nouv. Dict. d'Hist. Nat., XXXIV, 1819, 466.

Actodromas minutilla COUES, Proc. Acad. Nat. Sci. Phila., 1861, 191.

[242.1.] **Actodromas damacensis** (HORSFIELD).

Totanus damacensis HORSFIELD, Trans. Linn. Soc. Lond., XIII, 1821, 192.

Actodromas damacensis STEJNEGER, Proc. U. S. Nat. Mus., VI, 1883, 71.

GENUS **PELIDNA** CUVIER.

Pelidna CUVIER, Règne Animal, I, 1817, 490. Type, *Tringa alpina* LINNÆUS.

[243.] **Pelidna alpina** (LINNÆUS).

Tringa alpina LINNÆUS, S. N. ed. 10, I, 1758, 149.

Pelidna alpina C. L. BREHM, Vög. Deutschl., 1831, 661.

243*a*. **Pelidna alpina pacifica** (COUES).

Pelidna pacifica COUES, Proc. Acad. Nat. Sci. Phila., 1861, 189.

Pelidna alpina pacifica STEJNEGER, Bull. U. S. Nat. Mus., VIII, 1885, 120.

GENUS **EROLIA** VIEILLOT.

Erolia VIEILLOT, Analyse, 1816, 55. Type, *Erolia variegata* VIEILLOT (= *Tringa ferruginea* BRÜNNICH).

244. **Erolia ferruginea** (BRÜNNICH).

Tringa ferruginea BRÜNNICH, Orn. Bor., 1764, 53.

Erolia ferruginea A. O. U. COMMITTEE.

Erolia replaces *Ancylocheilus* (KAUP, 1829) of the Check-List. It refers unquestionably to the Curlew Sandpiper, although described and figured by Vieillot as a three-toed species.

GENUS **OXYECHUS** REICHENBACH.

Oxyechus REICHENBACH, Syst. Av., 1852, xviii. Type *Charadrius vociferus* LINNÆUS.

273. **Oxyechus vociferus** (LINNÆUS).

Charadrius vociferus LINNÆUS, S. N. ed. 10, I, 1758, 150.

Oxyechus vociferus REICHENBACH, Syst. Av., 1852, xviii.

GENUS **OCHTHODROMUS** REICHENBACH.

Ochthodromus REICHENBACH, Syst. Av., 1852, xviii. Type, *Charadrius wilsonia* ORD.

280. **Ochthodromus wilsonius** (ORD).

Charadrius wilsonia ORD, in WILSON's Am. Orn., IX, 1814, 77, pl. 73, fig. 5.

Ochthodromus wilsonius REICHENBACH, Syst. Av., 1852, xviii.

GENUS **PODASOCYS** COUES.

Podasocys COUES, Proc. Acad. Nat. Sci. Phila., 1866, 96. Type, *Charadrius montanus* TOWNSEND.

281. **Podasocys montanus** (TOWNSEND).

Charadrius montanus TOWNSEND, Journ. Acad. Nat. Sci. Phila., VII, 1837, 192.

Podasocys montanus COUES, Proc. Acad. Nat. Sci. Phila., 1866, 96.

296. **Cyrtonyx montezumæ** (VIGORS). This becomes

296. **Cyrtonyx montezumæ mearnsi** NELSON.

Mearns's Partridge.

Cyrtonyx montezumæ mearnsi NELSON, AUK, XVII, July, 1900, 255.

[B 477, *part*, C 394, *part*, R 485, *part*, C 578, *part*.]

GEOG. DIST.— Western Texas, New Mexico, and Arizona, south into Mexico. (*Cf.* NELSON, Auk, 1900, 225.)

310*a*. **Meleagris gallopavo fera** (VIEILLOT). In the first edition of the 'Nouveau Dictionnaire' (Vol. IX) Vieillot used the name *Meleagris silvestris*, which was later changed to *M. fera* (*cf.* SHERBORN, Auk, 1902, 419–420). The latter

name was inadvertently adopted by the Committee in the Ninth Supplement, but should now be replaced by

310*a*. **Meleagris gallopavo silvestris** (VIEILLOT).

Meleagris silvestris VIEILLOT, Nouv. Dict. d'Hist. Nat., IX, 1817, 447.

Meleagris gallopavo sylvestris ALLEN, Auk, XIX, 1902, 420.

[322.] **Geotrygon chrysia** (BONAPARTE). The authority and reference should be corrected to

[322.] **Geotrygon chrysia** SALVADORI.

Geotrygon chrysia SALVADORI, Cat. Birds Brit. Mus., XXI, 1893, 571 (*cf.* RILEY, Auk, 1902, 397).

337*c*. **Buteo borealis lucasanus** RIDGWAY. This is found to be indistinguishable from *Buteo borealis calurus*, and is to be eliminated. (*Cf.* BREWSTER, Bull. Mus. Comp. Zoöl., XLI, 1902, 83.)

SUBGENUS **TINNUNCULUS** VIEILLOT.

Tinnunculus VIEILLOT, Ois. Am. Sept., I, 1807, 39. Type, by elimination, *Falco columbarius* LINNÆUS.

This should replace the subgenus *Æsalon* of the Check-List, and the subgenus *Tinnunculus*, for the Sparrow Hawks, will become

SUBGENUS **CERCHNEIS** BOIE.

Cerchneis BOIE, Isis, 1826, 970. Type, *Falco rupicolus* DAUDIN. (*Cf.* HOWE, Contr. N. Amer. Orn., I, 1902, 28.)

360*a*. **Falco sparverius deserticolus** MEARNS.

An earlier name for this subspecies is found in

360*a*. **Falco sparverius phalœna** (LESSON).

Tinnunculus phalœna LESSON, Compl. Œuv. Buffon, XX, 1847, 178.

Falco sparverius phalæna NELSON, Auk, XIX, Oct. 1902, 398. (*Cf.* NELSON, Auk, 1902, 398.)

368. **Syrnium nebulosum** (FORSTER). This name, which has been in constant use for the Barred Owl, is found to apply exclusively to the Great Gray Owl (*cf.* PREBLE, N. Am. Fauna, No. 22, 1902, 109). The earliest available name for the Barred Owl appears to be

368. **Syrnium varium** (BARTON). Barred Owl

Strix varius BARTON, Fragm. N. H. Penn., 1799, 11.

Syrnium varium PREBLE, N. Am. Fauna, No. 22, 1902, 109.

368*a*. **Syrnium varium alleni** (RIDGWAY).

Strix nebulosa alleni RIDGWAY, Proc. U. S. Nat. Mus., III, 1880, 8.

Syrnium varium alleni PREBLE, N. Am. Fauna, No. 22, 1902, 109.

368*b*. **Syrnium varium helveolum** (BANGS).

Syrnium nebulosum helveolum BANGS, Proc. N. E. Zoöl. Club, I, 1899, 31.

Syrnium varium helveolum PREBLE, N. Am. Fauna, No. 22, 1902, 109.

370. **Scotiaptex cinerea** (GMELIN). This becomes

370. **Scotiaptex nebulosa** (FORSTER).

Strix nebulosa FORSTER, Philos. Trans., LXII, 1772, 424.

Scotiaptex nebulosum PREBLE, N. Am. Fauna, No. 22, 1902, 109.

[370*a*.] **Scotiaptex nebulosa lapponica** (THUNBERG).

Strix lapponica THUNBERG, K. Vet. Akad. nya Handl., XIX, 1798, 184.

Scotiaptex nebulosa lapponica A. O. U. COMMITTEE.

373.2. **Megascops xantusi** BREWSTER.

Xantus's Screech Owl.

Megascops xantusi BREWSTER, Bull. Mus. Comp. Zoöl., XLI, 1902, 93.

[B —, C —, R 403, *part*, C 470, *part.*]

GEOG. DIST.— Cape Region of Lower California.

375*e*. **Bubo virginianus elachistus** BREWSTER.

Dwarf Horned Owl.

Bubo virginianus elachistus BREWSTER, Bull. Mus. Comp. Zoöl., XLI, 1902, 96.

[B —, C —, R —, C —.]

GEOG. DIST.— Lower California.

394*e*. **Dryobates pubescens turati** (MALHERBE).

Willow Woodpecker.

Picus turati MALHERBE, Monogr. Picidées, I, 1861, 125, pl. 28.

Dryobates pubescens turati W. K. FISHER, Condor, IV, 1902, 68.

[B 77, *part*, C 299*a*, *part*, R 361*a*, *part*, C 441, *part.*]

GEOG. DIST.—"California, *except*: desert ranges and eastern slope of Sierra Nevada, coast region north of Marion Co., and region north of upper end of Sacramento Valley." (*Cf.* FISHER, Condor, IV, 1902, 70.)

SUBGENUS **ASYNDESMUS** COUES. This becomes

GENUS **ASYNDESMUS** COUES.

Asyndesmus COUES, Proc. Acad. Nat. Sci. Phila., 1866, 55. Type, *Picus torquatus* WILSON.

408. **Asyndesmus torquatus** (WILSON).

Picus torquatus WILSON, Amer. Orn., III, 1811, 31, pl. xx, fig. 3.

Asyndesmus torquatus COUES, Proc. Acad. Nat. Sci. Phila., 1866, 56.

SUBGENUS **CENTURUS** SWAINSON. This becomes

GENUS **CENTURUS** SWAINSON.

Centurus SWAINSON, Classif. Birds, II, 1837, 310. Type, *Picus carolinus* LINNÆUS.

409. **Centurus carolinus** (LINNÆUS).

Picus carolinus LINNÆUS, S. N. ed. 10, I, 1758, 113.

Centurus carolinus BONAPARTE, Geog. & Comp. List, 1838, 40.

410. **Centurus aurifrons** (WAGLER).

Picus aurifrons WAGLER, Isis, 1829, 512.

Centurus aurifrons LICHTENSTEIN, Nomencl. Av., 1854, 76.

411. **Centurus uropygialis** BAIRD.

Centurus uropygialis BAIRD, Proc. Acad. Nat. Sci. Phila., 1854, 120.

454*b*. **Myiarchus cinerascens pertinax** (BAIRD).

Lower California Flycatcher.

Myiarchus pertinax BAIRD, Proc. Acad. Nat. Sci. Phila., 1859, 303.

Myiarchus cinerascens pertinax BREWSTER, Bull. Mus. Comp. Zoöl., XLI, 1902, 117.

[B 131, *part*, C 248, *part*, R 313, *part*, C 375, *part*.]

GEOG DIST.— Southern Lower California.

SUBGENUS **NUTTALLORNIS** RIDGWAY. This becomes

GENUS **NUTTALLORNIS** RIDGWAY.

Nuttallornis RIDGWAY, Man. N. Am. Birds, 1887, 337. Type, *Tyrannus borealis* SWAINSON. (*Cf.* COUES, Osprey, III, 1899, 144.)

459. **Nuttallornis borealis** (SWAINSON).

Tyrannus borealis SWAINSON, Fauna Bor.-Amer., II, 1831, 141, pl. 35.

Nuttallornis borealis OBERHOLSER, Auk, XVI, Oct. 1899, 331.

474*a*. **Otocoris alpestris leucolæma** (COUES), of the Check-List, becomes

474*a*. **Otocoris alpestris arcticola** OBERHOLSER.

Pallid Horned Lark.

Otocoris alpestris arcticola OBERHOLSER, Proc. U. S. Nat. Mus., XXIV, 1902, 816.

[B —, C —, R —, C —.]

GEOG. DIST.— "In summer, Alaska (chiefly the interior), with the valley of the Upper Yukon River; in winter, south to Oregon, Utah, and Montana." (*Cf.* OBERHOLSER, Proc. U. S. Nat. Mus., XXIV, 1902, 816.)

474*c*. **Otocoris alpestris arenicola** HENSHAW. This becomes

474*c*. **Otocoris alpestris leucolæma** (COUES).

Desert Horned Lark.

Eremophila alpestris b. *leucolæma* COUES, Birds N. W., 1874, 38.

Otocoris alpestris leucolæma STEJNEGER, Proc. U. S. Nat. Mus., V, 1882, 34.

[B —, C 53*b*, R 300*a*, C 83.]

GEOG. DIST.— Western United States, from central Dakota,

western Kansas and western Nebraska to Idaho and Nevada, north to Alberta, Saskatchewan, and Assiniboia, south in winter to Colorado, Texas, southeastern California, and northwestern Mexico.

474*e*. **Otocoris alpestris chrysolæma** (WAGLER). This becomes

474*e*. **Otocoris alpestris actia** OBERHOLSER.

California Horned Lark.

Otocoris alpestris actia OBERHOLSER, Proc. U. S. Nat. Mus., XXIV, 1902, 845.

[B —, C 53*a*, *part*, R 300*b*, *part*, C 84, *part*.]

GEOG. DIST.—"Coast region of northern Lower California and of southern California north to San Francisco Bay, including the San Joaquin Valley." (*Cf.* OBERHOLSER, Proc. U. S. Nat. Mus., XXIV, 1902, 845). True *chrysolæma* WAGLER is confined to Mexico.

474*k*. **Otocoris alpestris hoyti** BISHOP.

Hoyt's Horned Lark.

Otocoris alpestris hoyti BISHOP, Auk, XIII, 1896, 130.

[B —, C —, R —, C —.]

GEOG. DIST.—"In summer British America from the west shore of Hudson Bay to the valley of the Mackenzie River, north to the Arctic coast, south to Lake Athabasca; in winter southward to Nevada, Utah, Kansas and Michigan, casually to Ohio and New York (Long Island)." (*Cf.* OBERHOLSER, Proc. U. S. Nat. Mus., XXIV, 1902, 812.)

474*l*. **Otocoris alpestris occidentalis** (MCCALL).

Montezuma Horned Lark.

Otocoris? occidentalis MCCALL, Proc. Acad. Nat. Sci. Phila., 1851, 218.

Otocoris alpestris occidentalis STONE, Proc. Acad. Nat. Sci. Phila., 1899, 21.

[B —, C —, R —, C —.]

GEOG. DIST.—"In summer, central New Mexico, west to central Arizona; in winter, south to northern Sonora and Chihuahua, Mexico, and southeast to Texas." (*Cf.* OBERHOLSER, Proc. U. S. Nat. Mus., XXIV, 1902, 856.)

474*m*. **Otocoris alpestris insularis** TOWNSEND.

Island Horned Lark.

Otocoris alpestris insularis TOWNSEND, Proc. U. S. Nat. Mus., XIII, 1890, 140.

[B —, C —, R —, C —.]

GEOG. DIST.— Santa Barbara Islands, California.

475. **Pica pica hudsonica** (SABINE). This should be corrected to

475. **Pica pica hudsonia** (SABINE), the latter being the original spelling of the specific name.

482*a*. **Aphelocoma sieberii couchii** (BAIRD).

Couch's Jay.

Cyanocitta couchii BAIRD, Pacific R. R. Reports, IX, 1858, 588.

Aphelocoma sieberii couchi OBERHOLSER, Auk, XIX, 1902, 300.

[B —, C —, R —, C —.]

GEOG. DIST.— Northeastern Mexico to southwestern Texas (Chisos Mountains). (*Cf.* OBERHOLSER, Auk, XIX, 1902, 300.)

501*c*. **Sturnella magna argutula** BANGS.

Southern Meadowlark.

Sturnella magna argutula BANGS, Proc. N. E. Zoöl. Club, I, 1899, 20.

[B 406, *part*, C 214, *part*, R 263, *part*, C 320, *part*.]

GEOG. DIST.— Florida and the Gulf coast to Louisiana, north through lower Mississippi Valley to southeastern Illinois, and southwestern Indiana.

SUBGENUS **MEGAQUISCALUS** CASSIN. This becomes

GENUS **MEGAQUISCALUS** CASSIN.

Megaquiscalus CASSIN, Proc. Acad. Nat. Sci. Phila., 1866, 409. Type, *Quiscalus major* VIEILLOT. (*Cf.* RIDGWAY, Bull. U. S. Nat. Mus., No. 50, pt. II, 1902, 235.)

513. **Megaquiscalus major** (VIEILLOT).

Quiscalus major VIEILLOT, Nouv. Dict. d'Hist. Nat., XXVIII, 1819, 487.

Megaquiscalus major RIDGWAY, Bull. U. S. Nat. Mus., No. 50, pt. II, 1902, 235.

513*a*. **Megaquiscalus major macrourus** (SWAINSON).

Quiscalus macrourus SWAINSON, Anim. in Menag., 1838, 299.

Megaquiscalus major macrourus RIDGWAY, Bull. U. S. Nat. Mus., No. 50, pt. II, 1902, 235.

No. 512 of the Check-List thus becomes No. 513*a*, the serial number 512 being eliminated.

GENUS **COCCOTHRAUSTES** BRISSON. This is eliminated from the Check-List.

SUBGENUS **HESPERIPHONA**. This becomes

GENUS **HESPERIPHONA** BONAPARTE.

Hesperiphona BONAPARTE, Consp. Avium, I, 1850, 505. Type, *Fringilla vespertina* W. COOPER. (*Cf.* RIDGWAY, Bull. U. S. Nat. Mus., No. 50, pt. I, 1901, 57.)

514. **Hesperiphona vespertina** (W. COOPER).

Fringilla vespertina W. COOPER, Ann. Lyc. N. H. N. Y., I, ii, 1825, 220.

Hesperiphona vespertina BONAPARTE, Consp. Avium, I, 1850, 505.

514*a*. **Hesperiphona vespertina montana** RIDGWAY.

Hesperiphona vespertina var. *montana* RIDGWAY, in Hist. N. Am. Birds, I, 1874, 449.

530*a*. **Astragalinus psaltria arizonæ** (COUES). This is eliminated from the Check-List (as equivalent to No. 530), the characters ascribed to it being due mainly to age or season. (*Cf.* GRINNELL, Condor, 1902, 115, 116; BREWSTER, Bull. Mus. Comp. Zoöl., XLI, 1902, 136.)

SUBGENUS **PASSERCULUS** BONAPARTE. This becomes

GENUS **PASSERCULUS** BONAPARTE.

Passerculus BONAPARTE, Geog. & Comp. List, 1838, 33. Type, *Fringilla savanna* WILSON. (*Cf.* RIDGWAY, Bull. U. S. Nat. Mus., No. 50, pt. I, 1901, 187.)

541. **Passerculus princeps** MAYNARD.

Passerculus princeps MAYNARD, Am. Nat. VI, 1872, 637.

542. **Passerculus sandwichensis** (GMELIN).

Emberiza sandwichensis GMELIN, S. N., I, ii, 1788, 875.

Passerculus sandwichensis BAIRD, Pacific R. R. Reports, IX, 1858, 444.

542*a*. **Passerculus sandwichensis savanna** (WILSON).

Fringilla savanna WILSON, Am. Orn., III, 1811, 55, pl. 22, fig. 2.

Passerculus sandwichensis savanna RIDGWAY, Proc. U. S. Nat. Mus., III, 1880, 178.

542*b*. **Passerculus sandwichensis alaudinus** (BONAPARTE).

Passerculus alaudinus BONAPARTE, Comptes Rendus, XXXVII, 1853, 918.

Passerculus sandwichensis γ. *alaudinus* RIDGWAY, Field and Forest, III, 1877, 198.

542*c*. **Passerculus sandwichensis bryanti** RIDGWAY.

Passerculus sandwichensis bryanti RIDGWAY, Proc. U. S. Nat. Mus., VII, 1885, 517.

543. **Passerculus beldingi** RIDGWAY.

Passerculus beldingi RIDGWAY, Proc. U. S. Nat. Mus., VII, 1885, 516.

544. **Passerculus rostratus** (CASSIN).

Emberiza rostrata CASSIN, Proc. Acad. Nat. Sci. Phila., 1852, 348.

Passerculus rostratus BAIRD, Pacific R. R. Reports, IX, 1858, 446.

544*a*. **Passerculus rostratus guttatus** (LAWRENCE).

Passerculus guttatus LAWRENCE, Ann. Lyc. N. H. N. Y., VIII, 1867, 473.

Passerculus rostratus var. *guttatus* COUES, Check-List, 1874, 33.

544*b*. **Passerculus rostratus halophilus** (MCGREGOR).

Ammodramus halophilus MCGREGOR, Auk, XV, July, 1898, 265.

Passerculus rostratus halophilus RIDGWAY, Bull. U. S. Nat. Mus., No. 50, pt. I, 1901, 202.

544*c*. **Passerculus rostratus sanctorum** (RIDGWAY).

Passerculus sanctorum RIDGWAY, Proc. U. S. Nat. Mus., V, 1883, 538.

Passerculus rostratus sanctorum RIDGWAY, Bull. U. S. Nat. Mus., No. 50, pt. I, 1901, 201.

SUBGENUS **COTURNICULUS** BONAPARTE. This becomes a full genus, to include Nos. 545, 546, 546*a*, and 546*b*. Hence

GENUS **COTURNICULUS** BONAPARTE.

SUBGENUS **CENTRONYX** BAIRD.

Centronyx BAIRD, Pacific R. R. Reports, IX, 1858, 440. Type, *Emberiza bairdii* AUDUBON.

545. **Coturniculus bairdii** (AUDUBON).

Emberiza bairdii AUDUBON, Birds Amer., VII, 1843, 359, pl. 500.

Coturniculus bairdii BONAPARTE, Consp. Avium, I, 1850, 481.

SUBGENUS **COTURNICULUS** BONAPARTE.

Coturniculus BONAPARTE, Geog. & Comp. List, 1838, 32. Type, *Fringilla passerina* WILSON.

546. **Coturniculus savannarum passerinus** (WILSON).

Fringilla passerina WILSON, Am. Orn., III, 1811, 76, pl. 26, fig. 5.

Coturniculus savannarum passerinus RIDGWAY, Proc. U. S. Nat. Mus., VIII, 1885, 568.

546*a*. **Coturniculus savannarum bimaculatus** (SWAINSON).

Ammodramus bimaculatus SWAINSON, Philos. Mag., n. ser., I, 1827, 435.

Coturniculus savannarum bimaculatus RIDGWAY, Bull. U. S. Nat. Mus., No. 50, pt. I, 1901, 205.

546*b*. **Coturniculus savannarum floridanus** MEARNS.

Florida Grasshopper Sparrow.

Coturniculus savannarum floridanus MEARNS, Proc. U. S. Nat. Mus., XXIV, 1902, 915.

[B —, C —, R —, C —.]

GEOG. DIST.— Central Florida (Kissimmee prairie region).

Nos. 547, 547*a*, and 548 are transferred from *Coturniculus* to *Ammodramus*. The reference to the subgenus *Ammodramus* on p. 227 (Check-List, 1895) is to be removed, and the reference to the genus on p. 223 is to be placed above No. 547.

581. **Melospiza melodia** (WILSON). This becomes a subspecies of *Melospiza cinerea* (GMELIN), hence Nos. 581–581*k*, together with four additional subspecies (581*l*–581*o*) and No. 581.1, will become

581. **Melospiza cinerea melodia** (WILSON).

Fringilla melodia WILSON, Am. Orn., II, 1810, 125, pl. xvi.

Melospiza cinerea melodia RIDGWAY, Bull. U. S. Nat. Mus., No. 50, pt. I, 1901, 354.

581*a*. **Melospiza cinerea fallax** (BAIRD).

Zonotrichia fallax BAIRD, Proc. Acad. Nat. Sci. Phila., 1854, 119.

Melospiza cinerea fallax RIDGWAY, Bull. U. S. Nat. Mus., No. 50, pt. 1, 1901, 362.

581*b*. **Melospiza cinerea montana** (HENSHAW).

Melospiza fasciata montana HENSHAW, Auk, I, July, 1884, 224.

Melospiza cinerea montana RIDGWAY, Bull. U. S. Nat. Mus., No. 50, pt. I, 1901, 358.

581*c*. **Melospiza cinerea heermanni** (BAIRD).

Melospiza heermanni BAIRD, Pacific R. R. Reports, IX, 1858, 478.

Melospiza cinerea heermanni RIDGWAY, Bull. U. S. Nat. Mus., No. 50, pt. I, 1901, 364.

581*d*. **Melospiza cinerea samuelis** (BAIRD).

Ammodramus samuelis BAIRD, Pacific R. R. Reports, IX, 1858, 455.

Melospiza cinerea samuelis RIDGWAY, Bull. U. S. Nat. Mus., No. 50, pt. I, 1901, 369.

581*e*. **Melospiza cinerea morphna** (OBERHOLSER).

Melospiza melodia morphna OBERHOLSER, Auk, XVI, April, 1899, 183.

Melospiza cinerea morphna RIDGWAY, Bull. U. S. Nat. Mus., No. 50, pt. I, 1901, 372.

581*f*. **Melospiza cinerea rufina** (BONAPARTE).

Passerella rufina BONAPARTE, Consp. Av., I, 1850, 477.

Melospiza cinerea rufina RIDGWAY, Bull. U. S. Nat. Mus., No. 50, pt. I, 1901, 373.

581*g*. **Melospiza cinerea rivularis** (BRYANT).

Melospiza fasciata rivularis BRYANT, Proc. Cal. Acad. Sci., 2d ser., I, Sept. 29, 1888, 197.

Melospiza cinerea rivularis RIDGWAY, Bull. U. S. Nat. Mus., No. 50, pt. I, 1901, 363.

581*h*. **Melospiza cinerea graminea** (TOWNSEND).

Melospiza fasciata graminea TOWNSEND, Proc. U. S. Nat. Mus., XIII, 1890, 139.

Melospiza cinerea graminea RIDGWAY, Bull. U. S. Nat. Mus., No. 50, pt. I, 1901, 369.

581*i*. **Melospiza cinerea clementæ** (TOWNSEND).

Melospiza fasciata clementæ TOWNSEND, Proc. U. S. Nat. Mus., XIII, 1890, 139.

Melospiza cinerea clementæ RIDGWAY, Bull. U. S. Nat. Mus., No. 50, pt. I, 1901, 368.

581*j*. **Melospizà cinerea juddi** (BISHOP).

Melospiza fasciata juddi BISHOP, Auk, XIII, April, 1896, 132.
Melospiza cinerea juddi A. O. U. COMMITTEE.

581*k*. **Melospiza cinerea merrilli** (BREWSTER).

Melospiza fasciata merrilli BREWSTER, Auk, XIII, Jan. 1896, 46.
Melospiza cinerea merrilli RIDGWAY, Bull. U. S. Nat. Mus., No. 50, pt. I, 1901, 361.

581*l*. **Melospiza cinerea pusillula** (RIDGWAY).

Alameda Song Sparrow.

Melospiza fasciata pusillula RIDGWAY, Auk, XVI, Jan. 1899, 35.
Melospiza cinerea pusillula RIDGWAY, Bull. U. S. Nat. Mus., No. 50, pt. I, 1901, 370.

[B —, C —, R —, C —.]

GEOG. DIST.— Salt marshes of San Francisco Bay, California.

581*m*. **Melospiza cinerea cooperi** (RIDGWAY).

San Diego Song Sparrow.

Melospiza fasciata cooperi RIDGWAY, Auk, XVI, Jan. 1899, 35.
Melospiza cinerea cooperi RIDGWAY, Bull. U. S. Nat. Mus., No. 50, pt. I, 1901, 367.

[B —, C —, R —, C —.]

GEOG. DIST. — San Quentin Bay, Lower California, north along the coast to Monterey Bay, California, east to Fort Tejon, San Bernardino, etc.

581*n*.. **Melospiza cinerea caurina** (RIDGWAY).

Yakutat Song Sparrow.

Melospiza fasciata caurina RIDGWAY, Auk, XVI, Jan. 1899, 36.

Melospiza cinerea caurina RIDGWAY, Bull. U. S. Nat. Mus., No. 50, pt. I, 1901, 375.

[B —, C —, R —, C —.]

GEOG. DIST.— Coast of Alaska, from Yakutat Bay to Lituya Bay.

581*o*. **Melospiza cinerea kenaiensis** (RIDGWAY).

Kenai Song Sparrow.

Melospiza melodia kenaiensis RIDGWAY, Auk, XVII, Jan. 1900, 29.

Melospiza cinerea kenaiensis RIDGWAY, Bull. U. S. Nat. Mus., No. 50, pt. I, 1901, 375.

[B —, C —, R —, C —.]

GEOG. DIST.— Coast of Kenai Peninsula, Alaska, from east side of Cook Inlet to Prince William Sound. (*Cf.* RIDGWAY, Bull. U. S. Nat. Mus., No. 50, pt. I, 1901, 376.)

581.1. **Melospiza cinerea insignis** (BAIRD).

Melospiza insignis BAIRD, Trans. Chicago Acad. Sci., I, 1869, 319, pl. xxix, fig. 2.

Melospiza cinerea insignis RIDGWAY, Bull. U. S. Nat. Mus., No. 50, pt. I, 1901, 376.

602. **Sporophila morelleti sharpei** LAWRENCE. This becomes

602. **Sporophila morelleti** (BONAPARTE).

Morellet's Seed-eater.

Spermophila morelleti BONAPARTE, Consp. Avium, I, 1850, 497.

Sporophila morelleti CABANIS, Mus. Hein., I, 1851, 150.

[B 388, C 200, R 252, C 296.]

GEOG. DIST.— Lower Rio Grande, in Texas, south through eastern Mexico and Central America, to Costa Rica (both sides). The subspecies *sharpei* is not satisfactorily differentiated from *morelleti*. (*Cf.* RIDGWAY, Bull. U. S. Nat. Mus., No. 50, pt. I, 1901, 575.)

[607.1.] **Piranga rubriceps** GRAY. This is removed from the 'Check-List' and becomes

18.1. **Piranga rubriceps** GRAY, of the 'Hypothetical List.'

GENUS **IRIDOPROCNE** COUES.

Iridoprocne COUES, Birds Colo. Valley, 1878, 412. Type, *Hirundo bicolor* VIEILLOT. (*Cf.* COUES, Osprey, III, 1899, 144.) Hence No. 614 becomes

614. **Iridoprocne bicolor** (VIEILLOT).

Hirundo bicolor VIEILLOT, Ois. Am. Sept., I, 1807, 61, pl. 31.

I[*ridoprocne*] *bicolor* COUES, Birds Colo. Valley, 1878, 412.

615*a*. **Tachycineta thalassina brachyptera** BREWSTER.

Saint Lucas Swallow.

Tachycineta thalassina brachyptera BREWSTER, Bull. Mus. Comp. Zoöl., XLI, 1902, 167.

[B 228, *part*, C 113, *part*, R 156, *part*, C 161, *part*.]

GEOG. DIST.—Cape region of Lower California. (*Cf.* BREWSTER, Bull. Mus. Comp. Zoöl., XLI, 1902, 167.)

627*a*. **Vireo gilvus swainsonii** (BAIRD).

Western Warbling Vireo.

Vireo swainsonii BAIRD, Pacific R. R. Reports, IX, 1858, 336.

V[*ireo*] *g*[*ilvus*] *swainsonii* COUES, Key N. A. Birds, 1872, 121.

[B 245, *part*, C 125*a*, R 139*a*, C 175.]

GEOG. DIST.— Western United States, east to the Rocky Mountains; south in winter to central and western Mexico. (*Cf.* BREWSTER, Bull. Mus. Comp. Zoöl., XLI, 1902, 174; RIDGWAY, Manual N. A. Birds, 1896, 472.)

GENUS **HELMITHERUS** RAFINESQUE. This name is corrected to **Helmitheros**, to agree with the original spelling.

656.1. **Dendroica nigrifrons** BREWSTER. This has been shown to intergrade with *D. auduboni* (*Cf.* RIDGWAY, Bull. U. S. Nat. Mus., No. 50, pt. II, 1902, 555); hence

656*a*. **Dendroica auduboni nigrifrons** (BREWSTER).

Dendroica nigrifrons BREWSTER, Auk, XVI, April, 1899, 94.

Dendroica auduboni nigrifrons RIDGWAY, Bull. U. S. Nat. Mus., No. 50, pt. II, 1902, 555.

681*e*. **Geothlypis trichas sinuosa** J. GRINNELL.

Salt Marsh Yellow-throat.

Geothlypis trichas sinuosa GRINNELL, Condor, III, May, 1901, 65.

[B —, C —, R —, C —.]

GEOG. DIST.— Salt marshes of San Francisco Bay, California. (*Cf.* RIDGWAY, Bull. U. S. Nat. Mus., No. 50, pt. II, 1902, 672.)

682.1. **Geothlypis poliocephala ralphi** RIDGWAY. This becomes

682.1. **Geothlypis poliocephala** BAIRD.

Rio Grande Yellow-throat.

Geothlypis poliocephala BAIRD, Review Am. Birds, 1865, 225.

[B —, C —, R —, C —.]

GEOG. DIST.— Lower Rio Grande Valley, in Texas, south into Mexico (Morelos, Michoacan, Sinaloa, etc.).

The supposed subspecies *ralphi* proves to be indistinguishable from *G. poliocephala* (*cf.* RIDGWAY, Bull. U. S. Nat. Mus., No. 50, pt. II, 1902, 687).

685*b*. **Wilsonia pusilla chryseola** RIDGWAY.

Golden Pileolated Warbler.

Wilsonia pusilla chryseola RIDGWAY, Bull. U. S. Nat. Mus., No. 50, pt. II, 1902, 714.

[B 213, *part*, C 102*a*, *part*, R 125*a*, *part*, C 148 *part*.]

GEOG. DIST. Pacific Coast district, from southern California to British Columbia, southward during migration to Arizona, Lower California, and western Mexico. (*Cf.* RIDGWAY, Bull. U. S. Nat. Mus., No. 50, pt. II, 1902, 714.)

SUBGENUS **TELMATODYTES** CABANIS. This becomes

GENUS **TELMATODYTES** CABANIS.

Telmatodytes CABANIS, Mus. Hein., I, 1850, 78. Type, *Certhia palustris* WILSON. (*Cf.* COUES, Osprey, III, 1899, 144.)

725. **Telmatodytes palustris** (WILSON).

Certhia palustris WILSON, Am. Orn., II, 1810, 58, pl. 12, fig. 4.

Telmatodytes palustris HENRY, Proc. Acad. Nat. Sci. Phila., 1859, 107.

725*a*. **Telmatodytes palustris paludicola** (BAIRD).

Cistothorus palustris, var. *paludicola* BAIRD, Rev. Am. Birds, I, 1864, 148.

Telmatodytes palustris paludicola RIDGWAY, Geol. Ex. 40th Parallel, IV, 1877, 425.

725*b*. **Telmatodytes palustris griseus** (BREWSTER).

Cistothorus palustris griseus BREWSTER, AUK, X, 1893, 216.

Telmatodytes palustris griseus A. O. U. COMMITTEE.

725*c*. **Telmatodytes palustris plesius** (OBERHOLSER).

Cistothorus palustris plesius OBERHOLSER, Auk, XIV, 1897, 188.

Telmatodytes palustris plesius A. O. U. COMMITTEE.

725.1. **Telmatodytes marianæ** (SCOTT).

Cistothorus marianæ SCOTT, Auk, V, April, 1888, 188.

Telmatodytes marianæ A. O. U. COMMITTEE.

727*c*. **Sitta carolinensis nelsoni** MEARNS.

Rocky Mountain Nuthatch.

Sitta carolinensis nelsoni MEARNS, Proc. U. S. Nat. Mus. XXIV, 1902, 923.

[B 278, *part*, C 38*a*, *part*, R 51*a*, *part*, C 58, *part*.]

GEOG. DIST. — Rocky Mountain region of the United States, south into Mexico (Chihuahua and Sonora). (*Cf.* MEARNS, Proc. U. S. Nat. Mus., XXIV, 1902, 923.)

727*d*. **Sitta carolinensis lagunæ** BREWSTER.

Saint Lucas Nuthatch.

Sitta carolinensis lagunæ BREWSTER, Auk, VIII, 1891, 149.

[B —, C 38*a*, *part*, R 51*a*, *part*, C 58, *part*.]

GEOG. DIST.— Cape region of Lower California. (*Cf.* BREWSTER, Bull. Mus. Comp. Zoöl., XLI, 1902, 203.)

The range of No. 727*a* thus becomes restricted to the Pacific coast region of the United States.

SUBGENUS **LOPHOPHANES** KAUP. This becomes

GENUS **BÆOLOPHUS** CABANIS.

Bæolophus CABANIS, Mus. Hein., I, 1850, 91. Type, *Parus bicolor* LINNÆUS.

Lophophanes was based on *Parus cristatus* LINNÆUS, which is generically distinct from the American crested Titmice. This

necessitates the adoption of *Bæolophus* as the generic name of *P. bicolor* and its allies (*cf.* RIDGWAY, Auk, XX, 1903, 308.) Hence

731. **Bæolophus bicolor** (LINNÆUS).

Parus bicolor LINNÆUS, S. N. ed. 12, I, 1766, 340.

B[æolophus] bicolor CABANIS, Mus. Hein., I, 1850, 91.

731*a*. **Bæolophus bicolor texensis** (SENNETT).

Parus bicolor texensis SENNETT, Auk, IV, 1887, 29.

Bæolophus bicolor texensis RIDGWAY, Auk, XX, 1903, 308.

732. **Bæolophus atricristatus** (CASSIN).

Parus atricristatus CASSIN, Proc. Acad. Nat. Sci. Phila., 1850, 103, pl. 2.

Bæolophus atricristatus RIDGWAY, Auk, XX, 1903, 308.

733. **Bæolophus inornatus** (GAMBEL).

Parus inornatus GAMBEL, Proc. Acad. Nat. Sci. Phila., 1845, 265.

Bæolophus inornatus RIDGWAY, Auk, XX, 1903, 308.

733*a*. **Bæolophus inornatus griseus** (RIDGWAY).

Lophophanes inornatus griseus RIDGWAY, Pr. U. S. Nat. Mus., V, Sept. 5, 1882, 344.

Bæolophus inornatus griseus RIDGWAY, Auk, XX, 1903, 308.

733*b*. **Bæolophus inornatus cineraceus** (RIDGWAY).

Lophophanes inornatus cineraceus RIDGWAY, Proc. U. S. Nat. Mus., VI, 1883, 154.

Bæolophus inornatus cineraceus RIDGWAY, Auk, XX, 1903, 308.

734. **Bæolophus wollweberi** (BONAPARTE).

Lophophanes wollweberi BONAPARTE, Compt. Rend., XXXI, 1850, 478.

Bæolophus wollweberi RIDGWAY, Auk, XX, 1903, 308.

741*b*. **Parus rufescens barlowi** J. GRINNELL.

Barlow's Chickadee.

Parus rufescens barlowi J. GRINNELL, Condor, II, 1900, 127.

[B—, C —, R —, C —.]

GEOG. DIST.— Coast Range of California, from Monterey county to San Francisco Bay. (*Cf.* GRINNELL, Condor, II, 1900, 127.)

II. PROPOSED CHANGES IN NOMENCLATURE NOT ADOPTED.

Cyclorrhynchus vs. *Phaleris* (*cf.* GRANT, Cat. Birds Brit. Mus., XXVI, 1898, 607). The type of *Phaleris*, by elimination, is *Alca pygmæa* GMELIN, hence no change is necessary.

37. **Stercorarius parasiticus** vs. *S cepphus*, and

38. **Stercorarius longicaudus** vs. *S. parasiticus* (*cf.* ROTHSCHILD & HARTERT, Novit. Zool., 1902, 413). In the opinion of the Committee the proposed changes are undesirable.

123*a*, 123*b*. **Phalacrocorax pelagicus robustus** et **resplendens** vs. *P. pelagicus*, and

124. **Phalacrocorax urile** vs. *P. bicristatus* (*cf.* GRANT, Cat. Bds. Brit. Mus., XXVI, 1898, 361, 358). A change in these cases appears to be unwarranted.

151. **Clangula clangula** vs. *C. glaucion* (*cf.* GODMAN, Biol. Cent.-Am., Aves, III, 1902, 225). As *Clangula* has page precedence over *glaucion* no change is necessary.

Charitonetta vs. **Clangula**. (*Cf.* GODMAN, Biol. Cent.-Am., Aves, III, 1902, 226). As *Charitonetta* seems fairly entitled to generic recognition, no change seems advisable.

Olor vs. *Cygnus* (*cf.* ELLIOT, Auk, 1899, 226). In accordance with its former ruling (Auk, 1899, 129) the Committee decided that the change in this case was unnecessary.

298*c*. **Canachites canadensis canace** vs. *C. canadensis*, and

298*b*. **Canachites canadensis osgoodi** vs. *C. canadensis* (*cf.* GRANT, Ibis, 1902, 233, 234). No change is considered necessary.

320. **Columbigallina passerina terrestris** vs. *Chamæpelia passerina*, and

320*a*. **Columbigallina passerina pallescens** vs. *Chamæpelia passerina* (*cf.* GODMAN, Biol. Centr.-Am., Aves, III, 1902, 250).

The Committee finds no reason for altering the status of these subspecies in the Check-List.

Buteola (*Cf.* COUES, Osprey, III, 1899, 144). The characters are too slight to warrant the adoption of *Buteola* as a full genus.

Strix vs. *Aluco*, and **Strigidæ** vs. *Aluconidæ* (*cf.* COUES, Auk, 1900, 66). No change is deemed necessary. Dr. Coues was in error when he stated that Brisson fixed the type of the genus *Strix* in 1760. (*Cf.* STONE, Auk, XX, 272.)

394*b*. **Dryobates pubescens homorus** vs. *D. p. leucurus* (*cf.* W. K. FISHER, Condor, IV, 1902, 69). It is considered inexpedient to make a change here, as Hartlaub's description of *D. leucurus* is too brief and inaccurate to render identification a matter of certainty.

Antrostomus vs. *Caprimulgus* (*cf.* Tenth Suppl., Auk, 1901, 317). In the absence of precise anatomical information concerning the members of these genera, it is thought to be unwise to change the status of the species in the Check-List.

464.2. **Empidonax insulicola** vs. *E. difficilis* (*cf.* GRINNELL, Pac. Coast Avif., No. 3, 1902, 43). No argument is advanced for this proposed change, and no action by the Committee is deemed necessary.

484*c*. **Perisoreus canadensis nigricapillus** vs. *P. c. fumifrons* (*cf.* HOWE, Osprey, 1902, 105).

485. **Perisoreus obscurus** vs. *P. canadensis obscurus* (*cf.* HOWE, Osprey, 1902, 105).

485*a*. **Perisoreus obscurus griseus** vs. *P. canadensis* (*cf.* HOWE, Osprey, 1902, 105).

The proposed changes in the above three cases appear to be quite unnecessary.

SUBGENUS **Picicorvus** vs. genus *Picicorvus* (*cf.* COUES, Osprey, III, 1899, 144). *Picicorvus* is not considered worthy of full generic rank (*cf.* Seventh Suppl., Auk, 1895, 167).

501*a*. **Sturnella magna hoopesi** vs. *S. m. mexicana* (*cf.* CHAPMAN, Bull. Am. Mus. N. H., XIII, 1900, 298, 303). This form is considered to be sufficiently distinct from *S. m. mexicana* to retain its present status in the Check-List.

550*d*. **Ammodramus maritimus macgillivraii** vs. *A. maritimus* (*cf.* HOWE, Contr. Am. Orn., I, 1902, 32). The Committee is unable to find sufficient grounds for reversing its decision in this case.

622*a*, *b*, *c*. **Lanius ludovicianus excubitorides**, **gambeli**, and **anthonyi** vs. *L. ludovicianus* (*cf.* GRANT, Novit. Zool. 1902, 461).

No change is considered necessary in respect to the status of these subspecies of *Lanius*.

Dendroica montana vs. *D. virens* (*cf.* RIDGWAY, Bull. U. S. Nat. Mus., No. 50, pt. II, 1902, 784). The identification of Wilson's *Sylvia montana* with *Dendroica virens* appears to be not without question, and its present position in the Hypothetical List is thought to best represent its status.

713*a*. **Heleodytes brunneicapillus bryanti** vs. *H. brunneicapillus* and

743*a*. **Psaltriparus minimus californicus** vs. *P. minimus* (*cf.* GRINNELL, Pac. Coast Avif., III, 1902, 68, 72). As no reasons are advanced for the proposed changes, no action by the Committee appears to be necessary.

III. SPECIES AND SUBSPECIES NOT ACCEPTED.

Xenopicus gravirostris GRINNELL, Condor, 1902, 89.

Characters too trivial and inconstant for recognition.

Otocoris alpestris enthymia OBERHOLSER.

Otocoris alpestris ammophila OBERHOLSER.

Otocoris alpestris leucansiptila OBERHOLSER. (*Cf.* OBERHOLSER, Proc. U. S. Nat. Mus., XXIV, 1902, 817, 849, 864.)

The characters exhibited by these forms are considered too slight for recognition in nomenclature.

Cyanocitta stelleri borealis CHAPMAN, Bull. Am. Mus. N. H., XVI, 1902, 240.

Rejected as being almost indistinguishable from true *stelleri*, the alleged differences proving to be mainly seasonal.

Ammodramus australis (MAYNARD). (*Cf.* DUBOIS, Syn. Avium, fasc. IX, 1901, 632.)

This is equivalent to *A. savannarum passerinus*, it having been based on a winter migrant of the latter obtained in the Bahamas.

Melospiza sanaka McGREGOR, Condor, III, 1901, 87.

Not distinguishable from *M. cinerea*.

Melospiza fasciata ingersolli McGREGOR, Bull. Cooper Orn. Club, I, 1899, 35.

Almost identical with *M. c. merrilli*.

Melospiza cinerea gouldi (BAIRD). (*Cf.* GRINNELL, Pac. Coast Avif., III, 1902, 65.)

A later name for *M. c. samuelis*, the type of *gouldi* being merely a specimen of *samuelis*.

Melospiza melodia santæcrucis GRINNELL, Condor, III, 1901, 92.

Not considered worthy of recognition, its relationship with *M. c. cooperi* being too close for separation as a distinct subspecies.

Progne subis floridana MEARNS, Proc. U. S. Nat. Mus., XXIV, 1902, 918.

Inseparable from *P. subis*, the alleged color characters being due to age.

Hirundo erythrogaster palmeri GRINNELL, Condor, IV, 1902, 71.

Considered as not satisfactorily distinguished from *H. erythrogaster*. (*Cf.* also Tenth Supplement, Auk, XVIII, 313.)

Geothlypis trichas scirpicola GRINNELL, Condor, III, 1901, 65.

Rejected as being equivalent to *G. t. arizela*.

IV. DEFERRED FOR FURTHER INVESTIGATION.

[Cases added to this list since the appearance of the last supplement are marked with an asterisk.]

Colymbidæ vs. *Podicipidæ* (*cf.* OBERHOLSER, Auk, 1899, 286).

Phalerinæ vs. **Simorhynchinæ** (*cf.* OBERHOLSER, Auk, 1899, 286).

52. **Larus vegæ** vs. *L. argentatus* (*cf.* KOBBÉ, Auk, 1902, 19–24).

94. **Puffinus fuliginosus** vs. *P. griseus* (*cf.* SALVIN, Cat. Bds. Br. Mus., XXV, 1896, 386).

120. **Phalacrocorax dilophus** vs. *P. auritus* (*cf.* GRANT, Cat. Bds. Br. Mus., XXVI, 1898, 373).

121. **Phalacrocorax mexicanus** vs. *P. vigua mexicanus* (*cf.* GRANT, Cat. Bds. Br. Mus., XXVI, 1898, 378).

127. **Pelecanus californicus** vs. *P. fuscus* [= *occidentalis*] *californicus* (*cf.* GRANT, Cat. Bds. Br. Mus., XXVI, 1898, 478).

Rallus levipes BANGS, Bull. New Engl. Zoöl. Club, I, 1899, 45.

216.1. **Porzana coturniculus** (*cf.* McLain, Bull. Cooper Orn. Club, I, 1899, 99).

[230.1.] **Gallinago major** (Gmelin) vs. *G. media* (*cf.* Oberholser, Auk, XVI, 1899, 179).

* *Totanus melanoleucus frazari* Brewster, Bull. Mus. Comp. Zoöl., XLI, 1902, 55.)

277*a*. **Ægialitis meloda circumcincta** vs. *Æ. meloda* (*cf.* Sharpe, Cat. Bds. Brit. Mus., XXIV, 1896, 294).

* *Lagopus leucurus peninsularis* Chapman, Bull. Am. Mus. N. H., XVI, 1902, 236.

*310. **Meleagris gallopavo merriami** vs. *M. g. intermedia* (*cf.* Grant, Ibis, 1902, 235).

*318. **Leptotila fulviventris brachyptera** vs. *L. brachyptera* (*cf.* Godman, Biol. Centr.-Am., Aves, III, 1902, 259).

**Accipiter velox rufilatus* (*cf.* Grinnell, Pac. Coast Avif., III. 1902, 32).

Buteo borealis umbrinus Bangs, Proc. New Engl. Zoöl. Club, II, 1901, 67.

**Buteo borealis socorroensis* (*cf.* Brewster, Bull. Mus. Comp. Zoöl., XLI, 1902, 35).

*358. **Falco richardsonii** vs. *F. columbarius richardsonii* (*cf.* Brewster, Bull. Mus. Comp. Zoöl., XLI, 1902, 90).

**Cerchneis sparverius paulus* Howe, Contr. Am. Orn., I, 1902, 26.

Nyctala vs. *Cryptoglaux* (*cf.* Richmond, Auk, 1901, 193).

*375*b*. **Bubo virginianus arcticus** vs. *B. v. subarcticus* (*cf.* Richmond, Proc. Biol. Soc. Wash., 1902, 86).

377. **Surnia ulula** vs. *S. u. doliata* (*cf.* Sharpe, Hand-List, I, 1899, 296).

**Speotyto cunicularia becki* ROTHSCHILD & HARTERT, Novit. Zool., IX, 1902, 405.

*396*a*. **Dryobates scalaris lucasanus** vs. *D. lucasanus* (*cf.* BREWSTER, Bull. Mus. Comp. Zoöl., XLI, 1902, 102).

Picoides arcticus tenuirostris BANGS, Auk, 1900, 131.

*407*b*. **Melanerpes formicivorus angustifrons** vs. *M. angustifrons* (*cf.* BREWSTER, Bull. Mus. Comp. Zoöl., XLI, 1902, 105).

**Myiarchus crinitus residuus* HOWE, Contr. Amer. Orn., I, 1902, 30.

*458*a*. **Sayornis nigricans semiatra** vs. *S. nigricans* (*cf.* BREWSTER, Bull. Mus. Comp. Zoöl., XLI, 1902, 119).

Contopus vs. *Horizopus* (*cf.* OBERHOLSER, Auk, 1899, 331).

Contopus richardsoni saturatus BISHOP, Auk, 1900, 116.

**Otocoris alpestris aphrasta* OBERHOLSER, Proc. U. S. Nat. Mus., XXIV, 1902, 860.

**Cyanocitta stelleri carbonacea* (*cf.* W. K. FISHER, Condor, 1902, 41).

**Agelaius phœniceus richmondi* (*cf.* RIDGWAY, Bull. U. S. Nat. Mus., No. 50, pt. II, 1902, 335).

*501*b*. **Sturnella magna neglecta** vs. *S. neglecta* (*cf.* RIDGWAY, *l. c.*, 365).

*503. **Icterus audubonii** vs. *I. melanocephalus auduboni* (*cf.* RIDGWAY, *l. c.*, 282).

Loxia curvirostra bendirei (*cf.* MERRIAM, N. Am. Fauna, No. 16, 1899, 123; RIDGWAY, Bull. U. S. Nat. Mus., No. 50, pt. I, 1901, 50).

*544*b*. **Ammodramus rostratus halophilus** vs. *A. r. guttatus* (*cf.* BREWSTER, Bull. Mus. Comp. Zoöl., XLI, 1902, 139).

567*b*. **Junco hyemalis connectens** vs. *J. oreganus shufeldti* (*cf.* RIDGWAY, Bull. U. S. Nat. Mus., No. 50, pt. I, 1901, 285).

567*c*. **Junco hyemalis thurberi** vs. *J. oreganus thurberi* (*cf.* RIDGWAY, *l. c.* 287).

567*d*. **Junco hyemalis pinosus** vs. *J. oreganus pinosus* (*cf.* RIDGWAY, *l. c.* 288).

568.1. **Junco annectens** vs. hybridity between *J. caniceps* and *J. mearnsi* (*cf.* RIDGWAY, *l. c.* 276).

570*a*. **Junco phæonotus dorsalis** vs. *J. dorsalis* (*cf.* RIDGWAY, *l. c.* 297).

574*a*. **Amphispiza belli nevadensis** vs. *A. nevadensis* (*cf.* GRINNELL, Auk, 1898, 59; FISHER, *ibid.* 190).

Melospiza cinerea cleonensis (*cf.* RIDGWAY, Bull. U. S. Nat. Mus., No. 50, pt. I, 1901, 371).
**Melospiza cinerea phæa* FISHER, Condor, 1902, 36.
**Melospiza coronatorum* GRINNELL & DAGGETT, Auk, 1903, 34.
Passerella iliaca fuliginosa RIDGWAY, Auk, 1899, 36.
Passerella iliaca annectens RIDGWAY, Auk, 1900, 30.
Passerella iliaca insularis RIDGWAY, Auk, 1900, 30.
Passerella iliaca townsendi RIDGWAY, Auk, 1900, 30.
**Passerella iliaca annectens* vs. *P. i. meruloides* (*cf.* GRINNELL, Condor, 1902, 45).

*588*d*. **Pipilo maculatus atratus** vs. *P. m. megalonyx* (*cf.* GRINNELL, Condor, 1902, 23).

591*a*. **Pipilo fuscus albigula** vs. *P. albigula* (*cf.* RIDGWAY, Bull. U. S. Nat. Mus., No. 50, pt. I, 1901, 433).

591*b*. **Pipilo fuscus crissalis** vs. *P. crissalis* (*cf.* RIDGWAY, *l. c.* 434).

591*c*. **Pipilo fuscus senicula** vs. *P. crissalis senicula* (*cf.* RIDGWAY, *l. c.* 436).

591*d*. **Pipilo fuscus carolæ** vs. *P. crissalis carolæ* (*cf.* RIDGWAY, *l. c.* 435).

591*d*. **Pipilo fuscus carolæ**. Proposed elimination from the Check-List (*cf.* Condor, 1901, 108).

SUBFAMILY **PTILIOGONATINÆ** vs. Family *Ptiliogonatidæ* (*cf.* RIDGWAY, Bull. U. S. Nat. Mus., No. 50, pt. I, 1901, 21).

Lanius ludovicianus migrans W. PALMER, Auk, 1898, 248.

* 649. **Compsothlypis nigrilora** vs. *C. pitiayumi nigrilora* (*cf.* RIDGWAY, Bull. U. S. Nat. Mus., No. 50, pt. II, 1902, 490).

* *Compsothlypis americana ramalinæ* RIDGWAY, *l. c.* 485.

*658. **Dendroica rara** vs. *D. cærulea* (A. ALLEN, Auk, XX, 1903, 216).

SUBFAMILY **MIMINÆ** vs. Family *Mimidæ* (*cf.* RIDGWAY, Bull. U. S. Nat. Mus., No. 50, pt. I, 1901, 23).

* *Heleodytes brunneicapillus couesi* (*cf.* MEARNS, Auk, 1902, 143).

* *Heleodytes brunneicapillus anthonyi* MEARNS, Auk, 1902, 143.

Salpinctes obsoletus pulverius GRINNELL, Auk, 1898, 238.

* *Salpinctes obsoletus pulverius* vs. *S. pulverius* (*cf.* GRINNELL, Pac. Coast Avifauna, III, 1902, 68).

* *Cistothorus palustris dissaëptus* BANGS, Auk, 1902, 352.

SUBFAMILY **SITTINÆ** vs. Family *Sittidæ* (*cf.* RIDGWAY, Bull. U. S. Nat. Mus., No. 50, pt. I, 1901, 22).

740*a*. **Parus hudsonicus stoneyi** vs. *P. h. evura* (*cf.* GRINNELL, Pac. Coast Avifauna, I, 1900, 60).

* *Parus hudsonicus littoralis* (*cf.* CHAPMAN, Bull. Am. Mus. N. H., XVI, 1902, 245).

Chamæa fasciata intermedia GRINNELL, Condor, II, 1900, 86.

742*a*. **Chamæa fasciata henshawi** vs. *C. fasciata* (*cf.* OSGOOD, Proc. Biol. Soc. Wash., XIII, 1899, 41).

*743*b*. **Psaltriparus minimus grindæ** vs. *P. grindæ* (*cf.* BREWSTER, Bull. Mus. Comp. Zoöl., XLI, 1902, 205).

*758*b*. **Hylocichla ustulata œdica** vs. *H. ustulata* (*cf.* GRINNELL, Auk, 1902, 128–130).

Hylocichla aonalaschkæ slevini GRINNELL, Auk, 1901, 258.

**Sialia sialis grata* (*cf.* HOWE, Contr. Am. Orn., 1902, 31).

Action on the following generic and subgeneric names is still deferred.

Ægialeus *Reichenb.*
Aristonetta *Baird.*
Astur *Lacép.*
* Chamæthlypis *Ridgw.*
Chroicocephalus *Eyton.*
Cymochorea *Coues.*
Dytes *Kaup.*
Endomychura *Oberh.*
Exanthemops *Elliot.*
Fuligula *Steph.*
Heteropygia *Coues.*
Hierofalco *Cuvier.*
Hydrocoloeus *Kaup.*
Limonites *Kaup.*
* Myioborus *Baird.*
* Oporornis *Baird.*
Ortygops *Heine.*
Pallasicarbo *Coues.*
*Peucedramus *Coues.*
Phœbastria *Reichenb.*
Proctopus *Kaup.*
Pseuduria *Coues.*
Psiloscops *Coues.*
Tachytriorchis *Kaup.*

NEST AND EGGS OF PHILADELPHIA VIREO. (Eggs natural size.)